

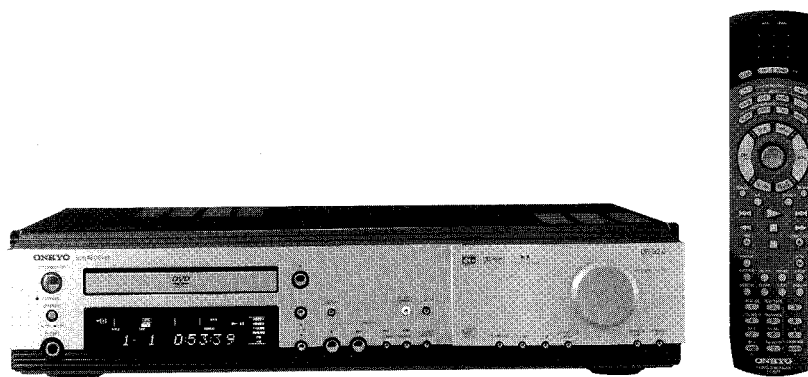
ONKYO® SERVICE MANUAL

Ref. No. 3645

102000

DVD RECEIVER

DR-S2.0



UD	120V AC, 60Hz
UP / UPA	230-240V AC, 50Hz

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  ON THE SCHEMATIC DIAGRAM AND IN THE PARTS LIST ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE THESE COMPONENTS WITH ONKYO PARTS WHOSE PART NUMBER APPEAR AS SHOWN IN THIS MANUAL.

MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

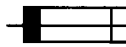
TABLE OF CONTENTS

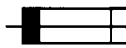
Service procedure-----	2
Specifications-----	3
Front panel / Display views-----	4
Rear panel / Remote controller views-----	5
Microprocessor connection diagram-----	6
Microprocessor terminal description-----	7
Printed circuit board parts list-----	8-12
IC block diagram and description-----	13-23
Replacement of DVD mechanism-----	24
Printed circuit board view / Schematic diagrams	
Primary circuit PC board-----	25-26
Power amplifier PC board-----	27-30
Microprocessoe / DSP circuit PC board-----	31-34
Display circuit PC board-----	35-38
Video amplifier PC board-----	39-44
Connection diagram-----	45-46
Printed circuit board view / Schematic diagrams	
Speaker terminal PC board-----	47-50
Electro volume circuit PC board-----	51
Video component output PC board-----	52
Upgraded firmware-----	53-54
Exploded parts list-----	55-56
Exploded view-----	57-58
Block diagram-----	59-60
Wiring diagram-----	61
Assembling of PAD-----	62-66
Packing view / Parts list-----	67

ONKYO®
AUDIO COMPONENTS

SERVICE PROCEDURE

1. Replacing the fuses

 This symbol located near the fuse indicates that the fuse used is show operating type. For continued protection against fire hazard, replace with same type fuse . For fuse rating, refer to the marking adjust to the symbol.

 Ce symbole indique que le fusible utilise est e lent. Pour une protection permanente, n'utiliser que des fusibles de meme type. Ce demier est indique la qu le present symbol est apposse.

REF.NO.	PART NO.	DESCRIPTION
F991	252162 	3.15A-UL/T-237, Fuse <D>
	252071 	1.25A-SE-EAW. FUSE <P, PA>
F921	252163 	4A-UL/T-237, Fuse <D>
	252077 	4A-SE-EAK, Fuse <P, PA>

NOTE : <D> : 120 V model only
<P, PA> : 230 V model only

2. To initialize the microprocessor and TEST MODE

1. Initializd the microprocessor

Press and hold down the SPEAKER A/B button, then press the POWER button.

2. Press and the hold down the SPEAKER A/B button , then press the SUBWOOFER MODE and STANDBY/ ON button.

It is displayed as "TEST -".

SURROUND MODE	TEST 1	SPEAKER A/B	TEST DOWN
STEREO	TEST 2	SPEAKER SETUP	TEST UP
T-D	TEST 3		
SUBWOOFER MODE	TEST 4		

3. Version of firmware of DVD

Press and hold down the SUBWOOFER MODE button, then press the POWER button at DVD position.

3. Safety-check out

(Only U.S.A. model)

After correcting the original service problem perform the following safety check before releasing the set to the customer. Connect the insulating-resistance tester between the plug of power supply cord and terminal GND on the back panel.

Specifications: More than 10Mohm at 500V

4. Changing the AM band step

With the exception of the worldwide models, a tuning step selector switch is not provided. When you change the band step, change the parts as shown below.

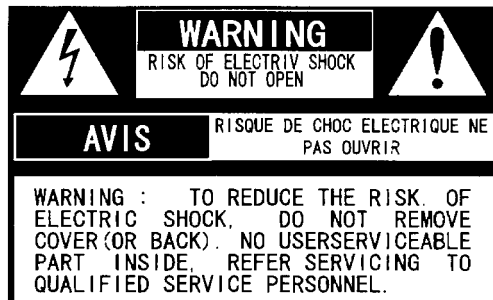
	To 10kHz	To 9kHz
R8057	2.2k ohm	22k ohm
R8157	10k ohm	10k ohm

5. Regional restriction codes (Region Number)

Regional restriction codes are built into DVD players and DVD videos for each sales region. If the regional code of the DVD receiver dose not match one of the regional codes on the DVD video, playback is not possible.

The regional number can be found on the rear panel of the DVD receiver. (e.g.  for Region 1)

6. CAUTION labels



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instruction in the literature accompanying the appliance.

WARNING : TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE. DANGEROUS HIGH VOLTAGES ARE PRESENT INSIDE THE ENCLOSURE. DO NOT OPEN THE CABINET. REFER SERVICING TO QUALIFIED PERSONNEL ONLY.

CAUTION : TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

ATTENTION : POUR EVITER LES CHOCES ELECTRIQUE, INTRODUIRE LA LAME LA PLUS LARGE DA LA FICHE DANS LA BORNE CORRESPONDANTE DA LA PRISE ET POUSSER JUSQU' AU FOND.

SPECIFICATIONS

AMPLIFIER SECTION

Power Output (FTC)	All channels 30 watts per channel min. RMS. into 6 ohms two channel driven, 1,000 Hz with no more than 0.6 % total harmonic distortion.	Output Level and Impedance	DIGITAL OUTPUT (OPT) 21 to 15 dBm REC OUT (TAPE/MD, VIDEO 1) 200 mV, 2.2 kohms PRE OUT (SUBWOOFER) 1 V, 2.2 kohms Composite (MON OUT, VIDEO 1) 1 Vp-p, 75 ohms S-VIDEO (MON OUT, VIDEO 1) Y: 1 Vp-p, 75 ohms C: 0.28 Vp-p, 75 ohms COMPONENT VIDEO OUTPUT Y: 1.0 Vp-p, 75 ohms PB/PR: 0.7 Vp-p, 75 ohms
Continuous power output (DIN)	All channels 30 watts per channel min. RMS. into 6 ohms two channel driven, 1,000 Hz	Frequency Response	20 to 30,000 Hz : +/- 0.8 dB
Total Harmonic Distortion	0.6 % at rated power 0.2 % at 1 watt output	Acoustic Control	1: +6 dB at 40 Hz 2: +10 dB at 55 Hz +5 dB at 10,000 Hz
IM Distortion	0.6 % at rated power 0.2 % at 1 watt output	Signal-to-noise Ratio	100 dB (IHF)
Damping Factor	40 at 8 ohms	Muting	∞
Input Sensitivity and Impedance	VIDEO 1 DIGITAL INPUT (OPT) 21 to 15 dBm VIDEO 2 DIGITAL INPUT (COAX) 0.5 Vp-p, 75 ohms LINE (VIDEO 1, 2, TV/LINE, TAPE/MD) 200 mV/50 kohms Composite (VIDEO 1, 2) 1 Vp-p, 75 ohms S-VIDEO (VIDEO 1, 2) Y: 1 Vp-p, 75 ohms C: 0.28 Vp-p, 75 ohms		
DVD SECTION			
Signal readout system	Optical non-contact	Frequency response	4 Hz - 20 kHz (44.1 kHz), 4 Hz - 22 kHz (48 kHz), 4 Hz - 44 kHz (96 kHz)
Linear velocity	3.49 m/s (Single Layer), 3.84 m/s (Dual Layer)	Wow and flutter	Below threshold of measurability
Error correction system	Reed Solomon Product Code		
Signal system	(USA and Canadian models) Standard NTSC (Other models) PAL/3.58NTSC		

TUNER SECTION

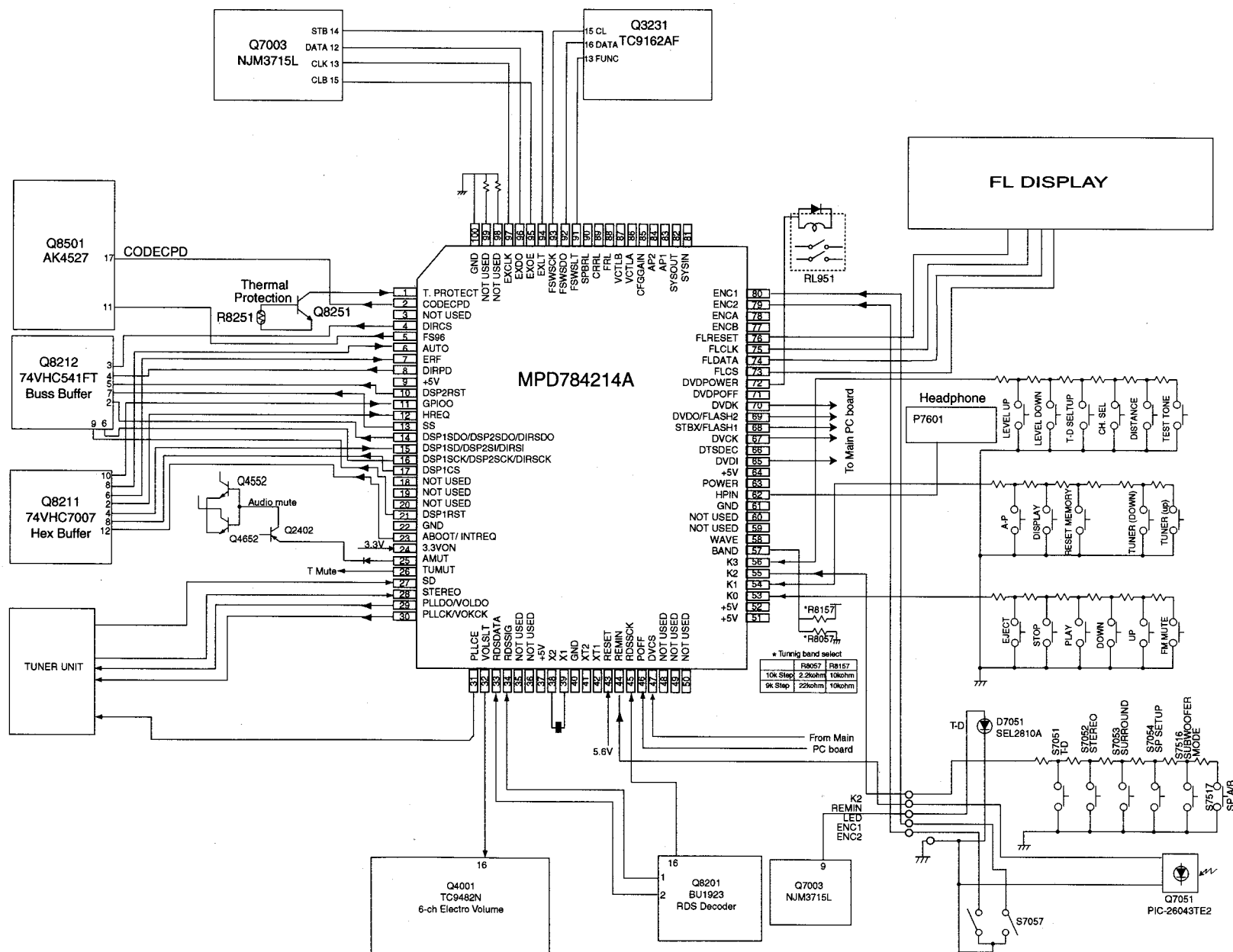
Tuning Range	FM: 87.50 to 108.00 MHz (50 kHz steps) AM: (USA and Canadian models) (Other models) 530 to 1710 kHz (10 kHz steps) 522 to 1611 kHz (9 kHz steps)
Usable Sensitivity	FM: Mono 11.2 dBf, 1.0 V (75 ohms IHF) 0.9 V (75 ohms DIN) Stereo 17.2 dBf, 2.0 V (75 ohms IHF) 23 V (75 ohms DIN) AM: 30 V
50 dB Quieting Sensitivity	FM: Mono 17.2 dBf, 2.0 V (75 ohms) Stereo 37.2 dBf, 20.0 V (75 ohms)
Capture Ratio	FM: 2.0 dB
Image Rejection Ratio	FM: (USA and Canadian models) (Other models) 40 dB 85 dB AM: 40 dB
IF Rejection Ratio	FM: 90 dB AM: 40 dB
Signal-to-noise Ratio	FM: Mono 76 dB, IHF Stereo 70 dB, IHF AM: 40 dB
Alternate Channel Att. (+/- 400 kHz)	FM: Mono 55 dB, IHF
Selectivity	FM: 50 dB, DIN
AM Suppression Ratio	FM: 50 dB
Harmonic Distortion	FM: Mono 0.2 % Stereo 0.3 % AM: 0.7 %
Frequency response	FM: 30 to 15,000 Hz (+/- 1.0 dB)
Stereo Separation	FM: 45 dB at 1,000 Hz 30 dB at 100 to 10,000 Hz
Stereo Threshold	FM: 17.2 dBf, 20 V (75 ohms)

GENERAL

Power Supply Rating	(USA and Canadian models)	Dimensions (W x H x D)	435 x 101 x 428 mm (17 ¹ / ₈ x 4 x 16 ⁷ / ₈ ins.)
and Power Consumption	AC 120 V, 60Hz 165W (Other models) AC 230-240 V, 50Hz 155W	Weight	9.2 kg (20.3 lb.)

Specifications and features are subject to change without notice.

DR-S2.0



TERMINAL DESCRIPTION

PIN NO.	FUNCTION	I/O	DESCRIPTION	PIN NO.	FUNCTION	I/O	DESCRIPTION
1	T.PROTECT	I	Thermal detector input terminal	52	+5V	-	Reference power supply terminal for A/D port. (+5V)
2	CODECPD	O	Power down signal output terminal to CODEC (AK4526).	53	K0	I	Key input terminal
3	NOT USED(GND)	-	Not used. To connect to ground.	54	K1	I	Key input terminal
4	DIRCS	O	Chip select output terminal	55	K2	I	Key input terminal
5	FS96	O	FS96k Hz signal output terminal to CODEC(AK4526)	56	K3	I	Key input terminal
6	AUTO	I	Input terminal of AUTO signal	57	BAND	I	Band select terminal
7	ERF	I	ERF signal input terminal from DIR (AK4112)	58	WAVE	I	Model name select input terminal
8	DIRPD	O	Power down signal output terminal to DIR (AK4112)	59-60	NOT USED(GND)	-	Not used. To connect to ground.
9	+5V	-	Power supply terminal. (+5V)	61	GND	-	Ground terminal for A/D port
10	DSP2RST	O	Reset output terminal to DSP56364	62	HPIN	I	Input terminal when the headphone is inserted.
11	GPIO	I	GPIO signal input terminal from DSP56364	63	POWER	O	Relay control output terminal for power supply.
12	HREQ	I	HREQ signal input terminal from DSP56364	64	+5V	-	Reference power supply terminal for A/D port. (+5V)
13	SS	O	Chip select output terminal to DSP56364	65	DVDI	I	Serial data input terminal from main microprocessor of the DVD.
14	DSP1SDO/DSP2SDO/DIRSDO	O	Serial data output terminal to DIR (AK4112). CS49300 and DSP56009	66	DTSDEC	I	Not used. To connect to ground.
15	DSP1SD/DSP2SI/DIRSI	I	Serial data input terminal from DIR (AK4112). CS49300 and DSP56009	67	DVCK	I	Serial clock input terminal from main microprocessor of DVD
16	DSP1SCK/DSP2SCK/DIRSCK	O	Serial clock output terminal to DIR (AK4112). CS49300 and DSP56009	68	STBX/FLASH1	O	Standby and FLASH signal output terminal to main microprocessor of DVD
17	DSP1CS	O	Chip select signal output terminal	69	DVDO/I-LASH2	O	Serial data output terminal to DVD main microprocessor for write the FLASH ROM
18-20	NOT USED(GND)	O	Not used.	70	DVCK	I	Serial clock input terminal from DVD main microprocessor.
21	DSP1RST	O	Reset output terminal to DSP (CS49300)	71	DVDPOFF	I	Power shut down input signal from DVD main microprocessor.
22	GND	-	Ground terminal	72	DVDPOWER	O	Power control terminal for DVD system.
23	ABOOTHINTREQ	I/O	AUTOBOOT and INTREQ I/O terminal for DSP (CS49300)	73	FLCS	O	Chip enable output terminal for FL tube.
24	3.3VON	O	Power supply output terminal for DVD (3.3V)	74	FLDATA	O	Serial data output terminal for FL tube.
25	AMUT	O	Muting control output terminal for amplifier section.	75	FLCLK	O	Serial clock output terminal for FL tube.
26	TU/MUT	O	Muting control output terminal for tuner section.	76	FLRESET	O	Reset signal output terminal for FL tube.
27	SD	I	Broadcast detection input terminal	77	ENCB	I	Input terminal from the rotary encoder of main volume.
28	STEREO	I	Stereo broadcast detection input terminal	78	ENCA	I	Input terminal from the rotary encoder of main volume.
29	PLL1D/VOLDO	O	PLL and VOLUME serial data output terminal	79	ENC2	I	Input select input terminal for rotary encoder.
30	PLL1CK/VOLCK	O	PLL and VOLUME serial clock output terminal	80	ENC1	I	Input select input terminal for rotary encoder.
31	PLICE	O	Chip enable output terminal to PLL IC	81	SYSIN	I	System code input terminal
32	VOLSLT	O	Latch signal output terminal to master volume IC	82	SYSOUT	O	System code output terminal
33	RDSDATA	I	Data input terminal from RDS decoder IC	83	AP1	O	Acoustic control output terminal.
34	RDSSIG	I	Signal input terminal from RDS decoder IC	84	AP2	O	Acoustic control output terminal.
35-36	NOT USED(GND)	O	Not used	85	CI-GGAIN	O	Add mute output terminal from subwoofer signal to front signal.
37	+5V	-	Power supply terminal (+5V)	86	VCTLA	O	VIDEO select output terminal to BA7625.
38	X2	O	Ceramic oscillator connection terminal	87	VCTLB	O	VIDEO select output terminal to BA7625.
39	X1	I	Connect 5.0MHz ceramic oscillator between the both terminals	88	FR1	O	Front channel relay control output terminal.
40	GND	-	Ground terminal	89	CRRL	O	Center and Surround channel relays control output terminal.
41	XT2	-	Sub-system clock output terminal. Not used	90	SPBRI	O	SPLAKER-B control output terminal.
42	XT1	-	Sub-system clock input terminal. Not used	91	FSWSLT	O	Serial latch output terminal to the function switch.
43	RESET	I	System reset input terminal	92	FSWSDO	O	Serial data output terminal to the function switch.
44	REMIN	I	Signal input terminal from remote sensor	93	FSWSCK	O	Serial clock output terminal to the function switch.
45	RDSSCK	I	Clock input terminal from RDS decoder IC	94	EXLT	O	Latch signal output terminal to expander port
46	POFF	I	Power failure detection terminal	95	EXOE	O	Enable signal output terminal to expander port
47	DVCS	I	Serial clock input signal from main microprocessor of DVD	96	EXDO	O	Serial data output terminal to expander port.
48-50	NOT USED(GND)	I	Not used. To connect to ground.	97	EXCLK	O	Serial clock output terminal to expander port.
51	+5V	-	Power supply terminal for A/D port. (+5V)	98-99	NOT USED(GND)	O	Not used.
				100	GND	-	Ground terminal

PRINTED CIRCUIT BOARD PARTS LIST

U2 : POWER AMPLIFIER CIRCUIT PC BOARD (NAAF-6954-1A/1B/1C)

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q501	222119	STK402 -050
Q601	222120	STK402 -250
Q903	222780075	78M07HF
Q904	222790075	79M07HF
Q921	222780565	78M56
Q951	222780094JRC	NJM7809FA
Q953	22241510	PQ3RD13
	Transistors	
Q651	2212445	2SK365 -GR
Q652	2213284	2SC1740S -R
Q653,Q922	2211504	2SA950 -Y
Q952	2213640	DTC123JS
	Diodes	
D591	22380038	RBV602, Bridge
D651,D955	223234R2 or	1SS352 or
	223269R2	1SS355 Chip D
D901,D921	22380022F or	RBV402 or
	22380271F	D3SBA20, Bridge
D922-D925, D951-D954, D956	22380260 or	RL1N4003 or
D926	22380035	GP104003E
	224492700R2	UDZ27B, Zener D
	Coils	
L501,L502, L601,L602	231176S	S-1.3C
	Capacitors	
C503,C504, C553,C603, C604	393342207	22 μ F,16V, Elect.
C505,C506, C555,C605, C606	393321017	100 μ F,6.3V, Elect.
C521,C522, C621,C622	354781019	100 μ F,50V, Elect.
C523,C623, C591,C592, C901,C902, C921,C935, C936,C951	354781009	10 μ F,50V, Elect.
C593,C594	374722244	0.22 μ F,50V,Plastic
C651	3504370	5600 μ F,35V,Elect.
C652	354741009	10 μ F,16V, Elect.
C903	354764709	47 μ F,35V, Elect.
C904	354752229S	2200 μ F,25V,Elect.
C911,C912, C925,C954, C960	354761029S	1000 μ F,35V,Elect.
C922	354780229	2.2 μ F,50V,Elect.
C924	354744729S	4700 μ F,16V,Elect.
C926	354741029S	1000 μ F,16V,Elect.
C927	354761019	100 μ F,35V,Elect.
C952	354784709	47 μ F,50V,Elect.
C955	354753329S	3300 μ F,25V,Elect.
C956	354724719	470 μ F,6.3V,Elect.
	354722219	220 μ F,6.3V,Elect.
	Resistors	
R511,R611, R612	443521004	10 Ω $\pm$ 5%,1/2W,Metal oxide
R521,R522, R621,R622	443521014	100 Ω $\pm$ 5%,1/2W,Metal oxide
R659,R660	443521514	150 Ω $\pm$ 5%,1/2W,Metal oxide
R901,R902, R952	453534794	0.47 Ω $\pm$ 5%,1/2W,Metal
R921	453530224	2.2 Ω $\pm$ 5%,1/2W,Metal
R922	443522224	2.2k Ω $\pm$ 5%,1/2W,Metal oxide
R923,R953	443522204	22 Ω $\pm$ 5%,1/2W,Metal oxide
R951	453532294	0.22 Ω $\pm$ 5%,1/2W,Metal
	Fuse label	
F921C	△ 29361732A	T4AL250V <UP, UPA>

CIRCUIT NO.	PART NO.	DESCRIPTION
	Fuse holders	
F921A,F921B	△ 25052133	NSCT-1P2031
	Plugs	
JL991B	25055624	NPLG-3P586
P503B	25055152	NPLG-8P136
P651	25055099	NPLG-2P83
P901A	25055166	NPLG-3P150
P902A	25055135	NPLG-5P119
P903A,P904A	25055133	NPLG-3P117
P922B	25055155	NPLG-11P139
P991A	25055675	NPLG-2P631
	Socket AS	
CN701A	2002A392640	NSAS-26P0800
P691	2002E390420	NSAS-4P0900
P921A	2002A292612	NSAS-26P0899
	Socket	
JL501A,JL502A	25050268	NSCT-4P96
JL901A	25051108	NSCT-4P895
JL902A	25051109	NSCT-5P896
JL903A	25051107	NSCT-3P894
JL903B	25051107	NSCT-3P894
JL991A	25051087	NSCT-3P874
	Relay	
RL951	25065563 or	NRL-2P5A-DC24-129 or
	25065590	NRL-2P8A-DC24-144
	Others	
Q921A,Q953A	27160315	RAD-95(B), Heat sink
D921A	27160477	(S)-146, Heat sink
Q921B,Q953B	82143010	3P+10FN(BC), Self tapping screw

U3 : PRIMARY CIRCUIT PC BOARD (NAAF-6955-1A/1B/1C)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Transistor	
Q991	2213640	DTC123JS
	Diodes	
D991,D992, D993,D994	22380260 or	RL1N4003 or
D995	22380035	GP104003E
	223234R2 or	1SS35 or
	223269R2	1SS355, Chip
	Capacitors	
C991	△ 3500196S	RE275V -103M, IS
C993	354780229	2.2 μ F,50V,Elect.
	Resistors	
R992	453530824	8.2 Ω $\pm$ 5%,1/2W, Metal
R991	△ 431533355	RC1/2GFKUL -3.3M, Solid
	Socket AS	
P995	2009990649UL	NSAS-2P0903
	Plugs	
P992A	25055675	NPLG-2P631
P995A	25055675	NPLG-2P631
	Fuse holders	
F991A,F991B	△ 25052133	NSCT-1P2031
	Fuse labels	
F991C	△ 29361580	T1.25AL250V <UP, UPA>
	Relay	
RL991	△ 25065583 or	NRL-1P5A-DC12-139 or
	△ 25065508	NRL-1P10A-DC12-093
	Power transformers	
T992	△ 2301381	NPT-1358D <UD>
	△ 2301382	NPT-1358P <UP, UPA>

U4 : 1ST REGULATOR IC PC BOARD (NAPS-6956-1A/1B/1C)

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q901	222780125JRC	78M12HF(NJM78M12FA)
Q902	222790125	79M12HF
	Capacitors	
C905,C908	354780229	2.2 μ F,50V,Elect.
	Sockets	
JL902B	25051109	NSCT-5P896

**U5 : 2ND REGULATOR IC PC BOARD
(NAPS-6957-1A/1B/1C)**

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q925	222780055	78M05HF
Q926	222780054NEC	7805HF(MPC7805HF)
	Transistors	
Q923	2211643 or	2SA965 -O or
	2211644	2SA965 -Y
Q924	2202176	2SB1370 -F
	Capacitors	
C933	354721029	1000 μ F,6.3V,Elect.
C934	354780229	2.2 μ F,50V,Elect.
	Resistor	
R925	443521004	10 Ω $\pm$ 5%,1/2W, Metal oxide
R926,R927	453532294	0.22 Ω $\pm$ 5%,1/2W, Metal
	Socket	
JL901B	25051108	NSCT-4P895

**U6 : POWER SWITCH PC BOARD
(NAETC-6958-1A/1B/1C)**

CIRCUIT NO.	PART NO.	DESCRIPTION
	Capacitor	
C995	△ 3500196S	RE275V -103M, ISC
	Push switch	
S992	△ 25035702	NPS-121 -L665P, Power

**U7 : VIDEO AMPLIFIER CIRCUIT PC BOARD
(NAVD-6959-1A/1B/1C)**

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q1201,Q1202	22241465R2	LA7106MFP
Q1211-Q1213	22241368R2	NJM2279M
Q1214	22241228R2	TC74HC4053FP
Q1215	22241228R2	TC74HC4053FP <UP>
Q1216	222740005R2O	74HC00(TC74HC00AF)
Q1217,Q1218	22240489R1NE	MPC4570G2 -T1
	Transistors	
Q1203,Q1207	2211705 or	2SD655 -E or
	2211706	2SD655 -F <UP>
Q1204-Q1206	2214490R2	RN1404 <UP>
Q1209	2211504	2SA950 -Y
Q1210,Q1219, Q1222	2214490R2	RN1404
Q1220,Q1221	2214540R2	RN2403
Q1223,Q1224	2214540R2	RN2403 <UP>
Q1225	2214373R2 or	2SA1162 -O or
	2214374R2	2SA1162 -Y <UP>
Q1226-Q1230	2215925R2	HN1C01F-GR <UP>
Q1231	2214490R2	RN1404 <UD,DPA>
	Diodes	
D1202,D1203	223234R2 or	1SS352 or
	223269R2	1SS355, Chip
D1204-D1206	22380260 or	RL1N4003 or
	22380035	GP104003E
D1209	223234R2 or	1SS352 or
	223269R2	1SS355, Chip <UP>
	Coils	
L1201-L1212	230921R2	BLM21B222SPT, Choke
L1213	231253K100	NCH-1490, Choke
	Capacitors	
C1201,C1202, C1206,C1219	354721019	100 μ F,6.3V,Elect.
C1203,C1207, C1208	354721019	100 μ F,6.3V,Elect.
C1204,C1205	354721019	100 μ F,6.3V,Elect. <UP>
C1209-C1214	354741019	100 μ F,16V,Elect.
C1215,C1217, C1225,C1226, C1267,C1268, C1285,C1286	354742219	220 μ F,16V,Elect.

CIRCUIT NO.	PART NO.	DESCRIPTION
C1221,C1223, C1248,C1250, C1252, C1261-C1264, C1280	354724719	470 μ F,6.3V,Elect.
C1283	354744719	470 μ F,16V,Elect. <UP>
	Resistors	
R1248-R1250	443522714	270 Ω $\pm$ 5%,1/2W, Metal oxide <UP>
	Socket	
CN301A	25052314	NSCT-14P2211
P1201	25051748	NSCT-8P1535, Monitor
P1202,P1203	25052274	NSCT-4P2171, Video 1/2 <UP>
P1205	25051748	NSCT-8P1535, Video 2 input
P1251A	25052313	NSCT-13P2210 <UP>
JL1552A	25051090	NSCT-6P877 <UD,UPA>
	Jack	
P1204	25045339	NPJ-4PDYE190, Video in/out
	Plug	
P3013B	25055153	NPLG-9P137

**U8 : VIDEO COMPONENT OUTPUT PC BOARD
(NADG-6960-1A/1B)**

CIRCUIT NO.	PART NO.	DESCRIPTION
	Coils	
L1501-L1506	230921R2	BLM21B222SPT <UD,UPA>
	Capacitors	
C1501-C1503	354724719	470 μ F,6.3V,Elect. <UD,UPA>
JL1552B	25055627	NPLG-6P589 <UD,UPA>
	Jack	
P1501	25045590	NPJ-3PDB401, Component output <UD,UPA>

**U9 : AV COMPONENT OUTPUT PC BOARD
(NAVD-6961-1B)**

CIRCUIT NO.	PART NO.	DESCRIPTION
	Transistors	
Q1601,Q1602	2215925R2	HN1C01F-GR <UP>
	Coils	
L1601-L1605	230921R2	BLM21B222SPT, Choke <UP>
	Capacitors	
C1601-C1604	354724719	470 μ F,6.3V,Elect. <UP>
C1605,C1606	354722219	220 μ F,6.3V,Elect. <UP>
C1617,C1618	354741009	10 μ F,16V,Elect. <UP>
	Resistors	
R1611,R1612	443522714	270 Ω $\pm$ 5%,1/2W, Metal oxide <UP>
	Sockets	
P1251B	25052313	NSCT-13P2210 <UP>
P1601	25052279	NSCT-21P2176 SCART terminal <UP>
	Other	
E1601	25065425	Terminal M3 <UP>

UD : USA and Canadian models only

UP : European model only

UPA : Australian model only

NOTE: THE COMPONENTS IDENTIFIED BY MARK
△ ARE CRITICAL FOR RISK OF FIRE AND
ELECTRIC SHOCK. REPLACE ONLY WITH
PART NUMBER SPECIFIED.

**U10 : INPUT/ SPEAKER TERMINAL PC BOARD
(NAAF-6965-1A/1B/1C)**

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q3001	22240881	TC9273N -010
Q3101,Q3201, Q3221,Q3232, Q3301	22241554R2	NJM4565V
Q3231	22240981R2	TC9162AF
	Transistors	
Q1001,Q1002, Q3203,Q3204	2215410R2	RN1441
Q1003	2214530R2	RN2402
Q3205	2214490R2	RN1404
Q3206	2214540R2	RN2403
Q503-Q506	2213640	DTC123JS
Q4155,Q4156,	2214530R2	RN2402
	Diodes	
D3201-D3203, D503, D504-D506	223234R2 or	1SS352 or 1SS355, Chip D
	Coils	
L502,L551	231176S	S-1,3C, S Coil
L3001,L3002	230956R2	BK1608LM252 -T
	Capacitors	
C509,C510, C559,C609, C610	374721044	0.1 μ F,50V,Plastic
C1001	354780339	3.3 μ F,50V, Elect.
C1003	354784799	0.47 μ F,50V, Elect.
C1004	354780229	2.2 μ F,50V, Elect.
C3015,C3016, C3101,C3102, C3105-C3108, C3209-C3212, C32131,C3232, C3309,C3310 C3201,C3202, C3222,C3301, C3302	355744709	47 μ F,16V, Elect.
C3213	355780479	4.7 μ F,50V, Elect.
C3235,C3236	354741009	10 μ F,16V, Elect.
C4161,C4260, C4261,	355780229	2.2 μ F,50V, Elect.
	Sockets AS	
P3012A	2009990620	NSAS-24P0850
P3013A	2002391810	NSAS-18P0230
P922A	2004C292239	NSAS-22P0898
	Sockets	
CN901	25052308	NSCT-8P2205
JL501B,JL502B	25051108	NSCT-4P895
JL503A	25051089	NSCT-5P876
P1001A	25052024 or 25050955 or 25051281 or 25051822 or 25052211	NSCT-15P1811 or NSCT-15P742 or NSCT-15P1070 or NSCT-15P1609 or NSCT-15P2108
P8003B	25052033 or 25050964 or 25051290 or 25051831 or 25052220	NSCT-24P1820 or NSCT-24P751 or NSCT-24P1079 or NSCT-24P1618 or NSCT-24P2117
	Jacks	
P3001,P3002	25045300	NPJ-6PDBL159, Video1/2 in/out
P3003	25045567	NPJ-1PDBL382, Subwoofer Preout
	Plugs	
P4001A	25055707	NPLG-11P663
P4002A	25055705	NPLG-9P661
	Terminals	
P501	25060290	NTM-8PDML221, Front L/R
P502	25060287	NTM-6PDML218, Surround/ Center

CIRCUIT NO.	PART NO.	DESCRIPTION
	Resistors	
R512,R561	443521004	10 Ω $\pm$ 5%, 1/2W, Metal oxide
R513,R514, R563,R613, R614	453630474	4.7 Ω $\pm$ 5%, 1W, Metal
	Relays	
RL503-RL505	25065563 or 25065590	NRL-2P5A-DC24-129 or NRL-2P8A-DC24-144
RL506	25065574	NRL-1P5A-DC24-134

**U11 : ELECTRO VOLUME CIRCUIT PC BOARD
(NAAF-6966-1A/1B/1C)**

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q4001	22241371	TC9482N
Q4251,Q4351, Q4351,Q4451, Q4151	22241554R2	NJM4565V
Q4701	22240025	LC4966
	Transistors	
Q4152-Q4154, Q4162, Q4252-Q4254 Q4262,Q4352, Q4452, Q4163, Q4552,Q4652, Q4653	2215410R2	RN1441
Q4702	2214470R2	RN1402
Q4703	2214490R2	RN1404
Q4704	2214540R2	RN2403
	Diodes	
D4161	223234R2 or 223269R2	1SS352 or 1SS355, Chip D
	Capacitors	
C4001-C4006 C4007,C4008, C4157, C4257-C4259, C4354-C4356, C4454,C4554 C4101,C4201, C4351,C4451, C4651	355762209 355744709	22 μ F,35V, Elect. 47 μ F,16V, Elect.
C4154,C4155, C4254-C4255 C4156,C4256 C4654	355781599 374721034 355780229	0.15 μ F,50V, Elect. 0.01 μ F,50V, Plastic 2.2 μ F,50V, Elect.
P503A	2009990631	NSAS-16P0868
	Socket	
P4001	25051236	NSCT-11P1026
P4002	25051234	NSCT-9P1024

**U12 : MICROPROCESSOR/ DSP CIRCUIT PC BOARD
(NADG-6969-1A/1B/1C)**

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q8001	22241563R3	MPD784214AGF -511-3BA
Q8211	222740077R2O	TC74HC17007AF
Q8212	22274541ER2O	TC74VHC541FT
Q8301	22241518R9	CS493263 -CL
Q8302	22240935R2	TC7WU04FU
Q8351	22241519R3	XCB56364FU100
Q8352	22241516R3 or 22241538R3	TC55V8128BFT -10 or TC55V8128BFT -12
Q8401	22241520R2	AK4112AVF
Q8501	22241529R3	AK4527VQ

CIRCUIT NO.	PART NO.	DESCRIPTION
Q8551,Q8552.	22241554R2	NJM4565V
Q8601,Q8621. Q8641		
Q8902	222780251DR2NE	MPC2925T
Q8903	222780331DR2NE	MPC2933T
	Transistors	
Q8002	2214490R2	RN1404
Q8176	2214530R2	RN2402
Q8251	2213143R2 or 2213144R2 or 2213145R2	2SC2712 -O or 2SC2712 -Y or 2SC2712 -GR
	Diodes	
D8001 -D8004, D8006,D8007	223234R2 or 223269R2	1SS352 or 1SS355
D8177,D8251, D8252, D8551 -D8558		
D8005	224490620R2	UDZ6.2B, Zener D
D8176	224490560R2	UDZ5.6B, Zener D
	Coils	
L8001,L8301. L8302,L8303. L8351 -L8353. L8401 -L8403. L8451,L8501, L8502	231237M022R2	NCH-1471 Choke
L8291	230955R2	BK1608HS102 -T
L8404,L8405	230956R2	BK1608LM252 -T
	Resonators	
X8001	3010333R2	CSTCC10.0MG-TC, Ceramic
X8301	3010324R2	CSTCV12.2MTJ0C4, Ceramic
X8401	3010323R2	HC-49/U'03C 12.288MHz, Crysta OSC
	Capacitors	
C8001 -C8003, C8305,C8363, C8401,C8403, C8409,C8611, C8621,C8631 C8641,C8647, C8651	356724709R2	47 μ F,6.3V, Elect. Chip
C8004,C8005. C8104 -C8106, C8505,C8901. C8905,C8907, C8908	356721019R2	100 μ F,6.3V, Elect. Chip
C8008	356780109R2	1 μ F,50V, Elect. Chip
C8103	3000119	FG0H474Z, EDL C
C8501,C8502, C8602,C8612. C8622,C8632. C8652,C8642	373021524R2	0.015 μ F,50V, Plastic Chip
C8503,C8556 C8510	356741009R2 354741009	10 μ F,16V, Elect. Chip 10 μ F,16V, Elect.
C8559 -C8601, C8657	356744709R2	47 μ F,16V, Elect. Chip
C8603,C8604, C8613,C8614, C8623,C8624, C8633,C8634 C8643,C8644, C8653,C8654	373026814R2	680pF,50V, Plastic Chip
C8628,C8638, C8648	356780229R2	2.2 μ F,50V, Elect. Chip
	Sockets	
CN301A	25052579R2	
P7003A	25052588R2	NSCT-22P2485
P8003A	25052220	NSCT-24P2117

CIRCUIT NO.	PART NO.	DESCRIPTION
P8002	25055233	NPLG-2P217
P8452B	25055966R2	NPLG-6P919
P8601	25055972R2	NPLG-12P925
P921B	25055973R2	NPLG-13P926
	Jack	
P8001	25045581R2	HSJ1501-011010, RI
	Others	
E8001,E8002	25065425	M3 Screw terminal
P8911	27190540	Holder
P8912	27300833	WS-2NS, Clamp
P8913,P8914	27190608 -1	CA-0 V0, Holder
U13 : DIGITAL IN-OUT TERMINAL PC BOARD		
(NADG-6970-1A/1B/1C)		
CIRCUIT NO.	PART NO.	DESCRIPTION
	IC	
Q8451	222740046R20	74HC004(1C74HC004F)
	Photo couplers	
U8451	24120084	GP1FH501RZ, Video 1 (Opt.)
U8453	24120085	GP1FA551TZ, Output (Opt.)
	Socket AS	
P8452A	2009990619	NSAS-12P0849
	Resistors	
L8452-L8454	435030004R1	0 Ω 1W,Chip
	Jack	
P8451	25045548	NPJ-1PDOR369, Digital I/O
	Capacitor	
C8458	355721019	100 μ F,6.3V, Elect.

**U14 : DISPLAY CIRCUIT PC BOARD
(NADIS-6976-1A/1B/1C)**

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q7002	22240685R9	M66004FP
Q7003	22241531	NU3715L
	FL Display	
Q7001	212210	14-BT-63GNK
	Diodes	
D7001,D7002, D7004	225392	SML79423C-TP15, LED
D7006	225389	SEL2110R-TP6, LED
D7008	224470472	MTZJ4.7B, Zener D
D7009	22380260 or 22380035	RL1N4003 or GP104003E
	Socket AS	
P7001A	2002A391450	NSAS-14P0863
	Socket	
P7003B	25052359	NSCT-22P2256
	Push switches	
S7001-S7012	25035699	NPS-111-S662
	Capacitors	
C7004	353781009	10 μ F, 50V, Elect.
C7006	353721019	100 μ F, 6.3V, Elect.
	Resistor	
R7040	453530474	4.7 $\Omega \pm 5\%$, 1/2W, Metal
	Other	
Q7001A	27191129	FL Holder

**U15 :KEY SWITCH PC BOARD
(NASW-6977-1A/1B/1C)**

CIRCUIT NO.	PART NO.	DESCRIPTION
	Remote sensor	
Q7051	241330	PIC-26043T7:2
	Rotary encoder	
S7057	25065575	EC16B2425
	Diode	
D7051	225388	SEL2810A -1P2, LED
	Capacitor	
C7051	353721019	100 μ F, 6.3V, Elect.
	Push switches	
S7051-S7056	25035699	NPS-111-S662
	Plug	
P7001B	25055151	NPLG-7P135,

U16 : HEAD PHONE TERMINAL PC BOARD
(NAETC-6978-1A/1B/1C)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Coils	
L7601-L7604	230921R2	BLM21B222SPT , Choke
	Socket	
JL503B	25051089	NSCT-5P876
	Jack	
P7601	25045514	YKB26-5005 , Head phone
	Resistors	
R7601 ,R7602	443523914	390 Ω $\pm$ 5% , 1/2W , Metal oxide
	Other	
E7601	27141059	Retainer

U17 : THERMISTOR PC BOARD
(NAETC-7021-1A/1B/1C)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Plug	
P961B	25055962R2	NPLG-2P915
	Thermistor	
R691	4000149	PTH9M04BB222TS2F333

NOTE:

THE COMPONENTS IDENTIFIED BY MARK Δ ARE
 CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK.
 REPLACE ONLY WITH PART NUMBER SPECIFIED.

TERMINAL DESCRIPTION

PIN/FUNCTION

No.	Pin Name	I/O	Description
1	SDOS	I	SDTO Source Select Pin (Note 1) "L" : Internal ADC output, "H" : DAUX input
2	I2C	I	Control Mode Select Pin This pin should be connected to DVSS.
3	SMUTE	I	Soft Mute Pin When this pin goes to "H", soft mute cycle is initialized. When returning to "L", the output mute releases.
4	BICK	I	Audio Serial Data Clock Pin
5	LRCK	I	Input Channel Clock Pin
6	SDTI1	I	DAC1 Audio Serial Data Input Pin
7	SDTI2	I	DAC2 Audio Serial Data Input Pin
8	SDTI3	I	DAC3 Audio Serial Data Input Pin
9	SDTO	O	Audio Serial Data Output Pin
10	DAUX	I	AUX Audio serial Data Input Pin
11	DFS	I	Double Speed Sampling Mode Pin (Note 1) "L": Normal Speed, "H": Double Speed
12	DEM1	I	De-emphasis 1 Pin (Note 2)
13	DEM0	I	De-emphasis 2 Pin (Note 2)
14	TVDD	-	Output Buffer Power Supply Pin, 2.7V ~ 5.5V
15	DVDD	-	Digital Power Supply Pin, 4.5V ~ 5.5V
16	DVSS	-	Digital Ground Pin, 0V
17	PDN	I	Power-Down & Reset Pin When "L", the AK4528 is powered-down and the control registers are reset to default state. If the state of CAD0-1 changes, then the AK4527 must be reset by PDN.
18	ICKS2	I	Input Clock Select 2 Pin (Note 1) This pin should be connected to DVSS.
19	ICKS1	I	Input Clock Select 1 Pin (Note 1)
20	ICKS0	I	Input Clock Select 0 Pin (Note 1)
21	CAD1	I	Chip Address 1 Pin (Note 1)
22	CAD0	I	Chip Address 0 Pin (Note 1)
23	LOUT3	O	DAC3 Lch Analog Output Pin
24	ROUT3	O	DAC3 Rch Analog Output Pin
25	LOUT2	O	DAC2 Lch Analog Output Pin
26	ROUT2	O	DAC2 Rch Analog Output Pin
27	LOUT1	O	DAC1 Lch Analog Output Pin
28	ROUT1	O	DAC1 Rch Analog Output Pin
29	LIN-	I	Lch Analog Negative Input Pin
30	LIN+	I	Lch Analog Positive Input Pin
31	RIN-	I	Rch Analog Negative Input Pin
32	RIN+	I	Rch Analog Positive Input Pin
33	DZF2	O	Zero Input Detect 2 Pin When the input data of the group 1 follow total 8192 LRCK cycles with "0" input data, this pin goes to "H". This pin is always "L" if P/S= "H".
34	VCOM	O	Common Voltage Output Pin, AVDD/2 Large external capacitor around 2.2 μ F is used to reduce power-supply noise.
35	VREFH	I	Positive Voltage Reference Input Pin, AVDD
36	AVDD	-	Analog Power Supply Pin, 4.5V ~ 5.5V
37	AVSS	-	Analog Ground Pin, 0V
38	DZF1		Zero Input Detect 1 Pin When the input data of the group 1 follow total 8192 LRCK cycles with "0" input data, this pin goes to "H". This pin is always "L" if P/S= "H".
39	MCLK	I	Master Clock Input Pin
40	P/S	I	Parallel/Serial Select Pin "L": Serial control mode, "H": Parallel control mode
41	DIF0	I	Audio Data Interface Format 0 Pin in parallel control mode
	CSN	I	Chip Select Pin in serial control mode
42	DIF1	I	Audio Data Interface Format 1 Pin in parallel control mode
	CCLK	I	Control Data Clock Pin in serial control mode
43	LOOP0	I	Lookback Mode 0 Pin in parallel control mode Enables digital look-back from ADC to 3 DACs.
	CDTI	I	Control Data Input Pin in serial control mode
44	LOOP1	I	Lookback Mode 1 Pin (Note 1) Enables all 3 DAC channels to be input from SDTI1.

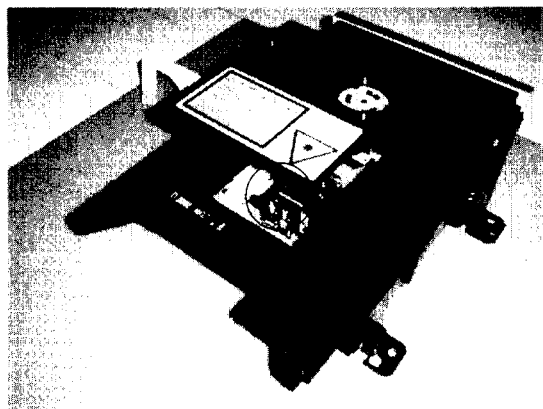
Notes: 1. SDOS, SMUTE, DFS, ICKS2-0 and LOOP 1 pins are Ored with register data if P/S="L".

2. DEM1-0 pins are Ored with register data of DEMA1-C0 bits if P/S="L".

DEM1 pin="H" : DEMA1= DEMB1=DEMC1="1"

DEM0 pin="H" : DEMA0= DEMB0=DEMC0="1"

REPLACEMENT OF DVD MECHANISM

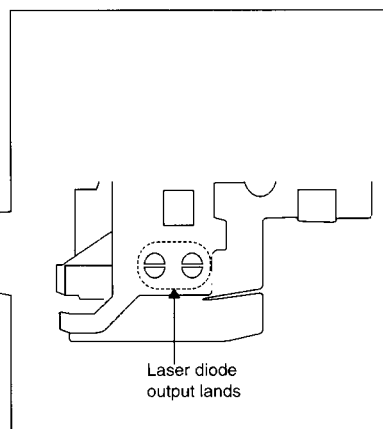
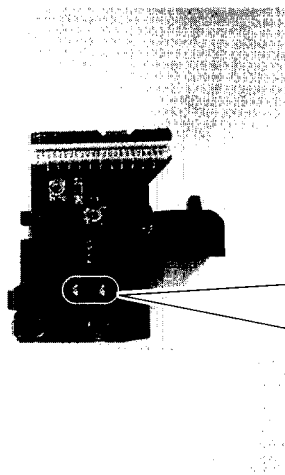


The laser diode in the optical pickup block is so sensitive to static electricity, surge current and etc. That the components are liable to be broken down or its reliability remarkable deteriorated.

During repair, carefully take the following precautions.

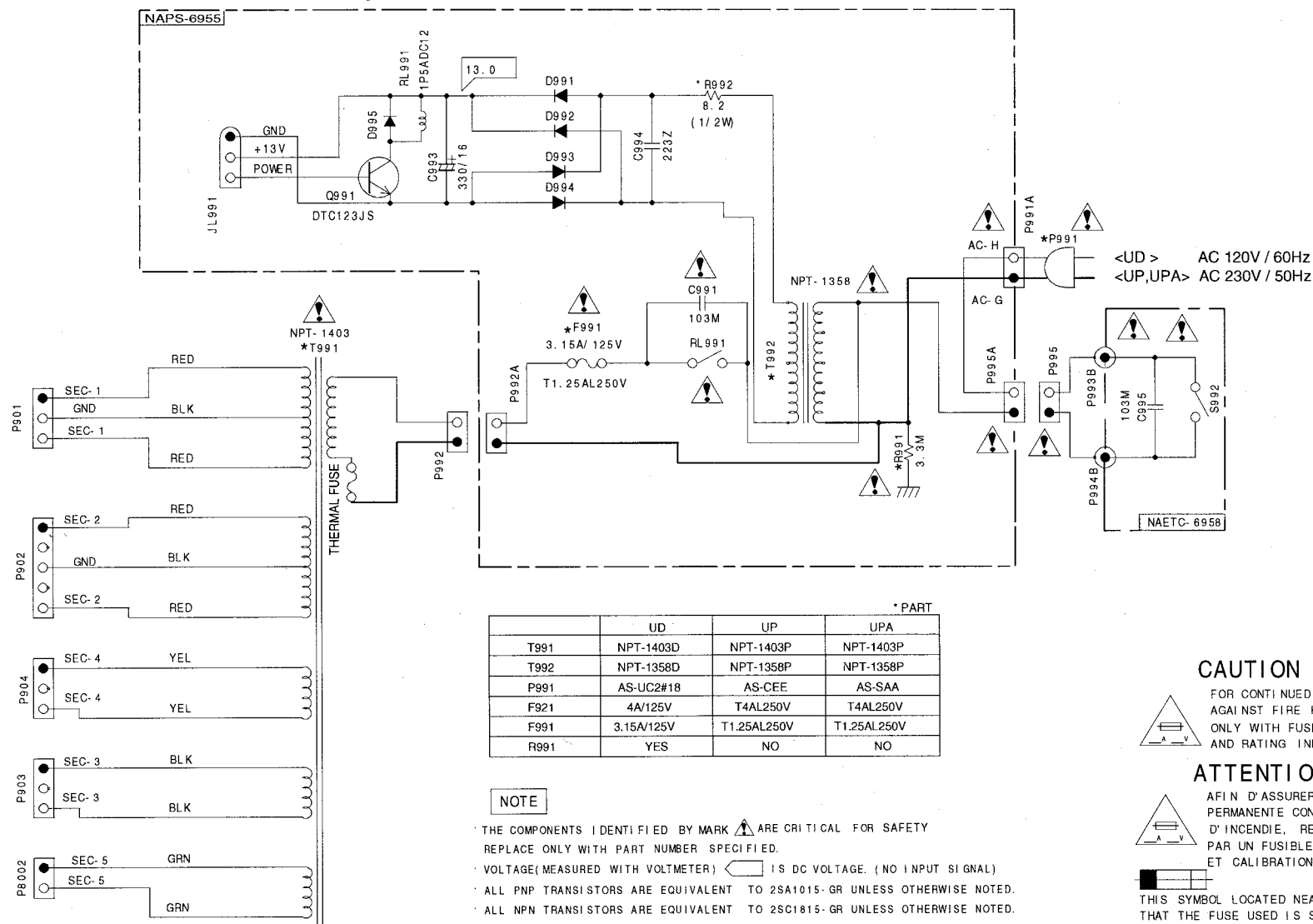
Do not touch the optical pickup object lens with the hands.

1. Remove the top cover with five screws. Remove four screws of the mechanism.
2. Solder the LD output lands on the DVD optical pickup. (See to following figures)
3. Disconnect the FFC (CN-501) , CN502 and CN503.
4. Replace the pickup mechanism assembly.
5. Connect the FFCs.
6. Unsolder the laser diode output lands.



SCHEMATIC DIAGRAM

Primary circuit PC board



NOTE

- THE COMPONENTS IDENTIFIED BY MARK  ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
- VOLTAGE (MEASURED WITH VOLTMETER)  IS DC VOLTAGE. (NO INPUT SIGNAL)
- ALL PNP TRANSISTORS ARE EQUIVALENT TO 2SA1015-GR UNLESS OTHERWISE NOTED.
- ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR UNLESS OTHERWISE NOTED.
- ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS () ARE IN μ F/VV.
- ALL CAPACITORS ARE IN pF/50V UNLESS OTHERWISE NOTED.
- EX) 030-3pF 330-33pF 331-330pF 333-0.033uF
- ALL RESISTORS ARE IN OHMS 1/4WATTS UNLESS OTHERWISE NOTED.
- THE THICK LINES ON PC BOARD ARE THE PRINTING SIDE OF THE PARTS.
- EX)  PRINTING SIDE
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

CAUTION

FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH FUSE OF SAME TYPE AND RATING INDICATED.

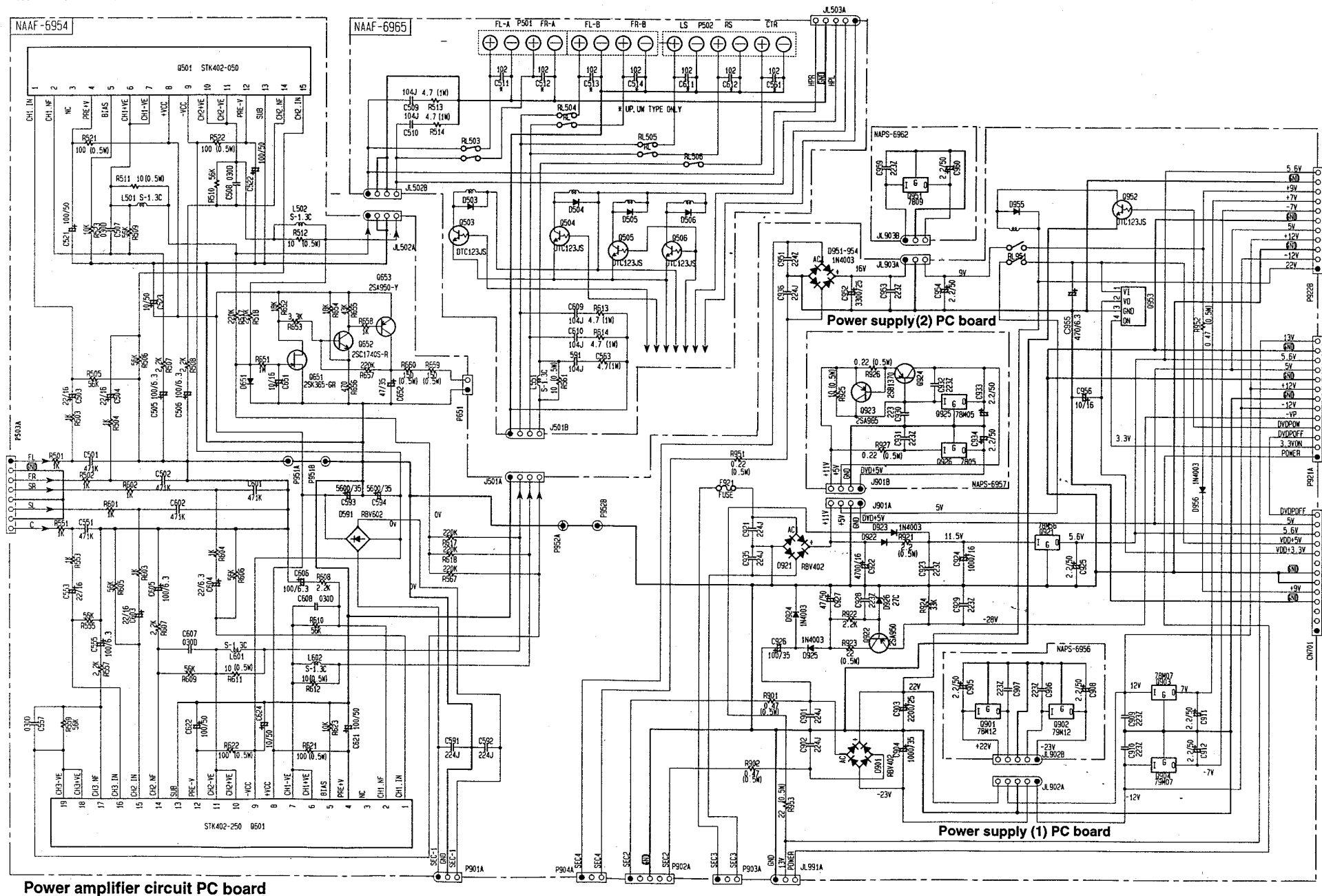
ATTENTION

AFIN D'ASSURER UNE PROTECTION PERMANENTE CONTRE LES RISQUES D'INCENDIE, REMPLACER UNIQUEMENT PAR UN FUSIBLE DE MEME TYPE ET CALIBRATION COMME INDIQUE.

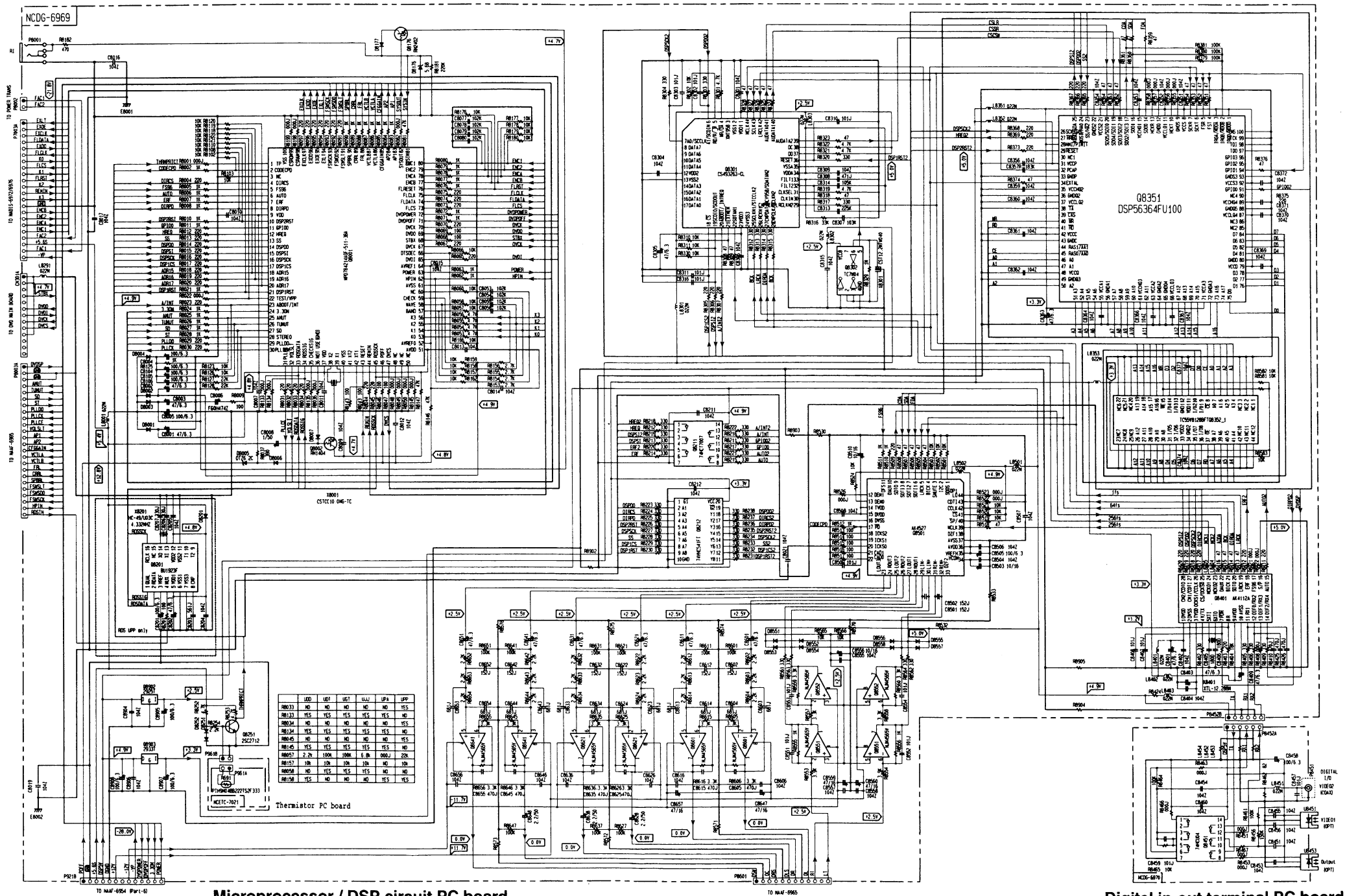
THIS SYMBOL LOCATED NEAR THE FUSE INDICATES THAT THE FUSE USED IS SLOW OPERATING TYPE FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE WITH SAME TYPE FUSE. FOR FUSE RATING REFER TO THE MAKING ADJACENT TO THE SYMBOL.

CE SYMBOLE INDIQUE QUE LE FUSIBLE UTILISE EST A LENT, E POUR UNE PROTECTION PERMANENTE, N'UTILISER QUE DES FUSIBLES DE MEME TYPE. CE DARNIER EST INDIQUE LA QU LE PRESENT SYMBOLE EST APPOSE.

SCHEMATIC DIAGRAM 2



SCHEMATIC DIAGRAM 3

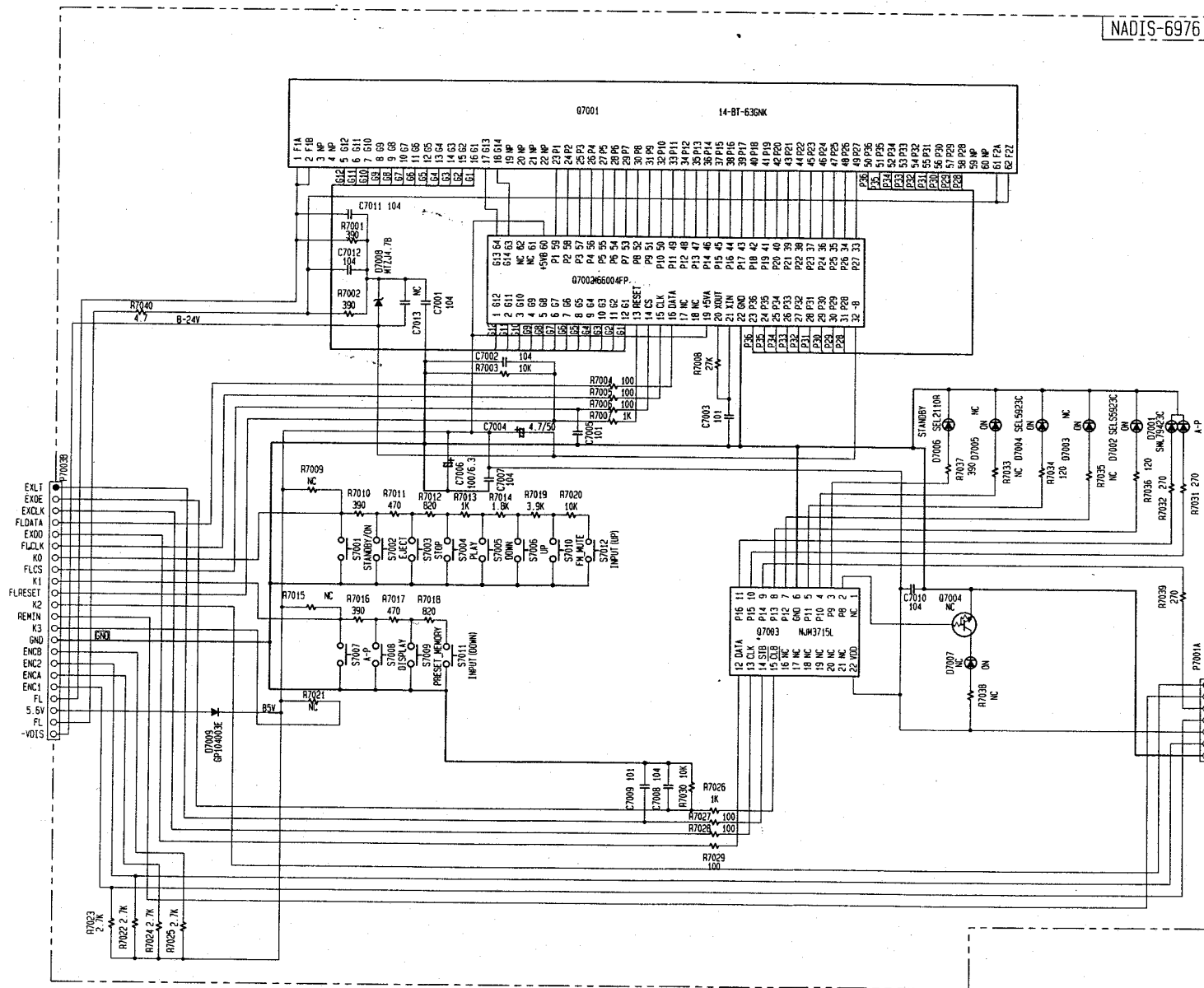


Microprocessor / DSP circuit PC board

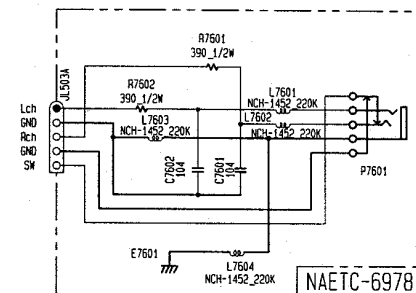
Digital in-out terminal PC board

SCHEMATIC DIAGRAM 4

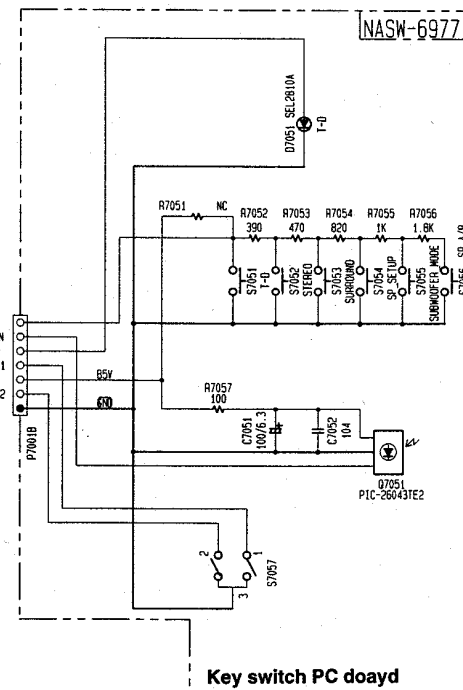
Display circuit PC board



Headphone terminal PC board

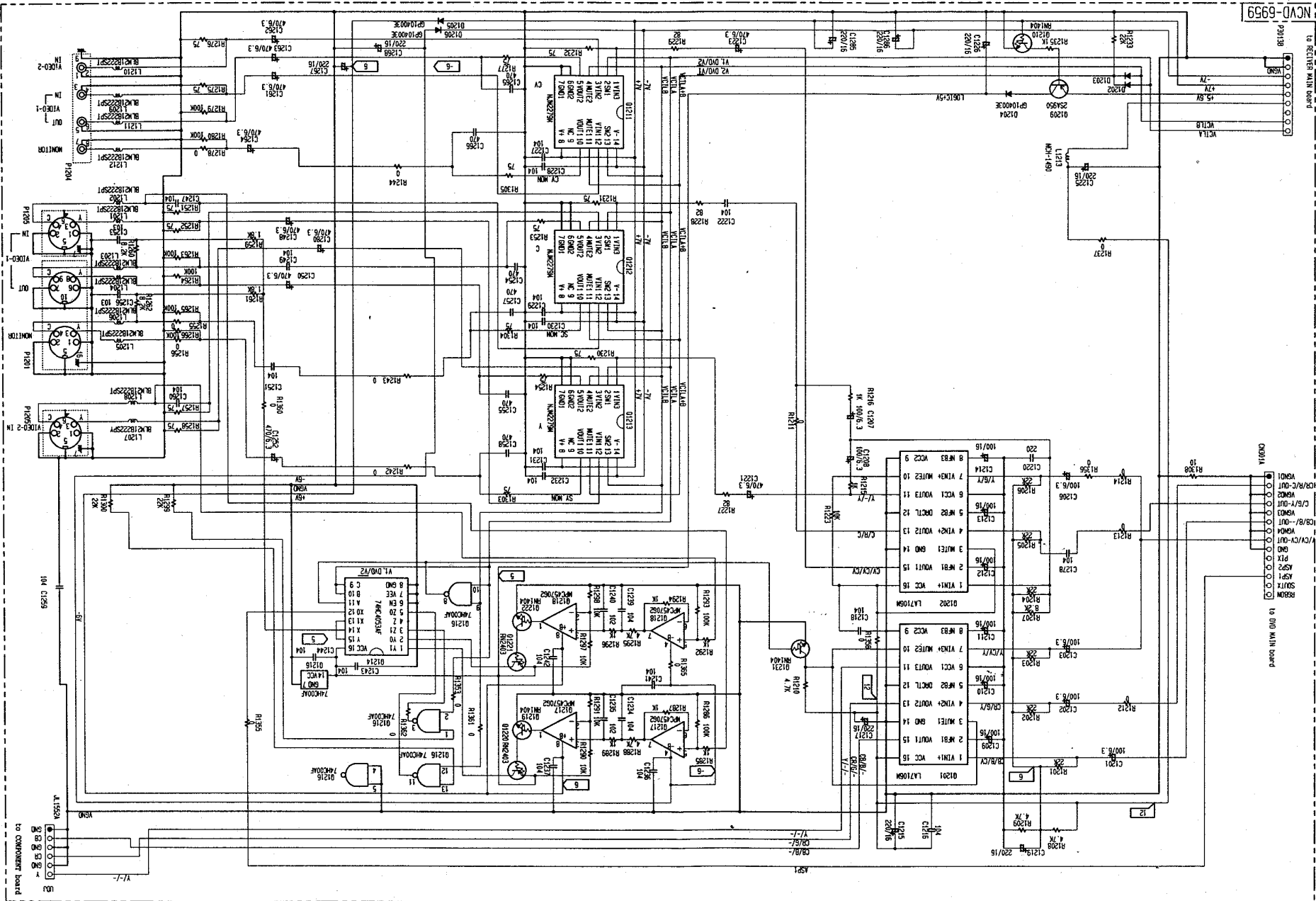


NASW-6977

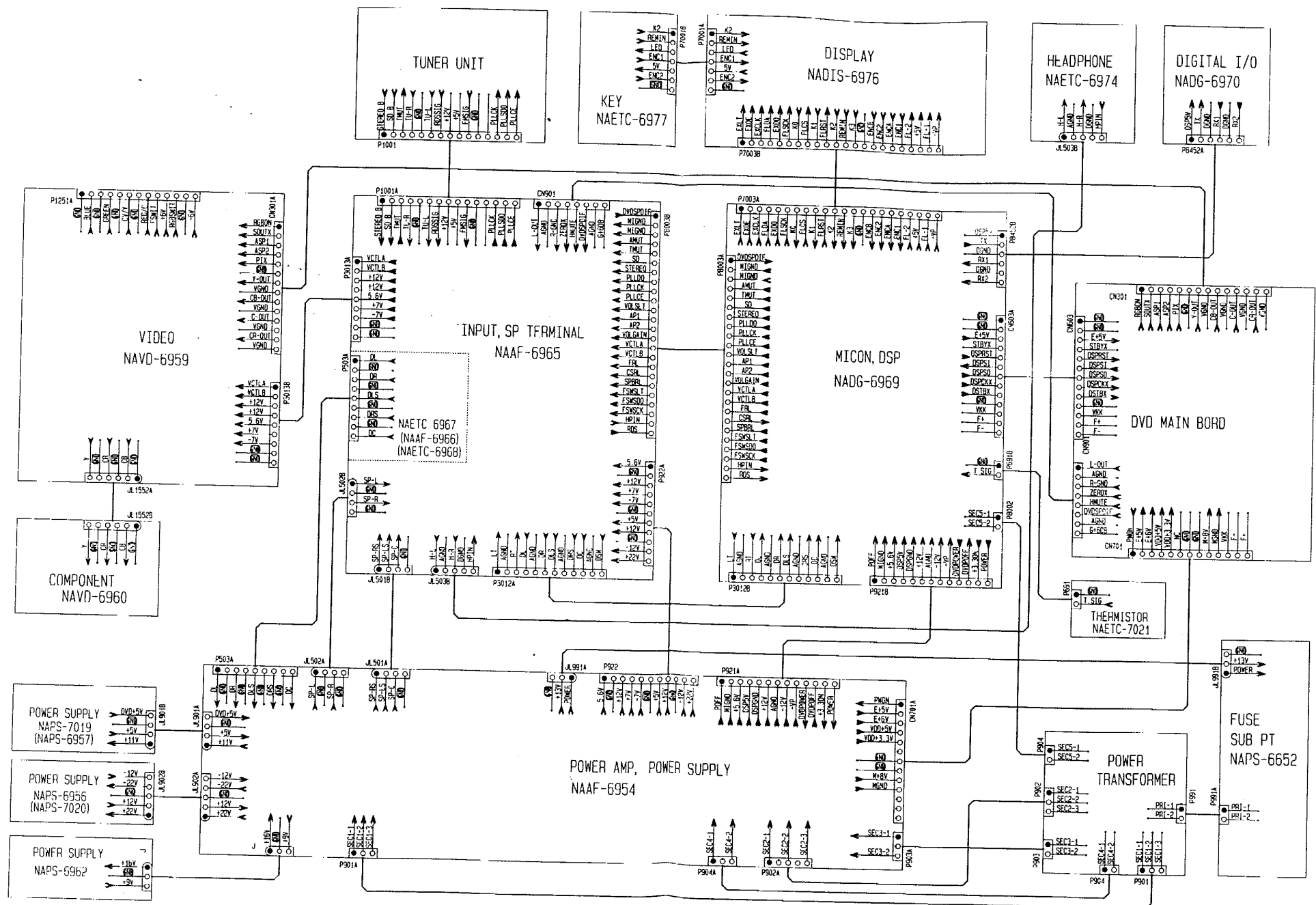


Key switch PC board

NCVD-6959

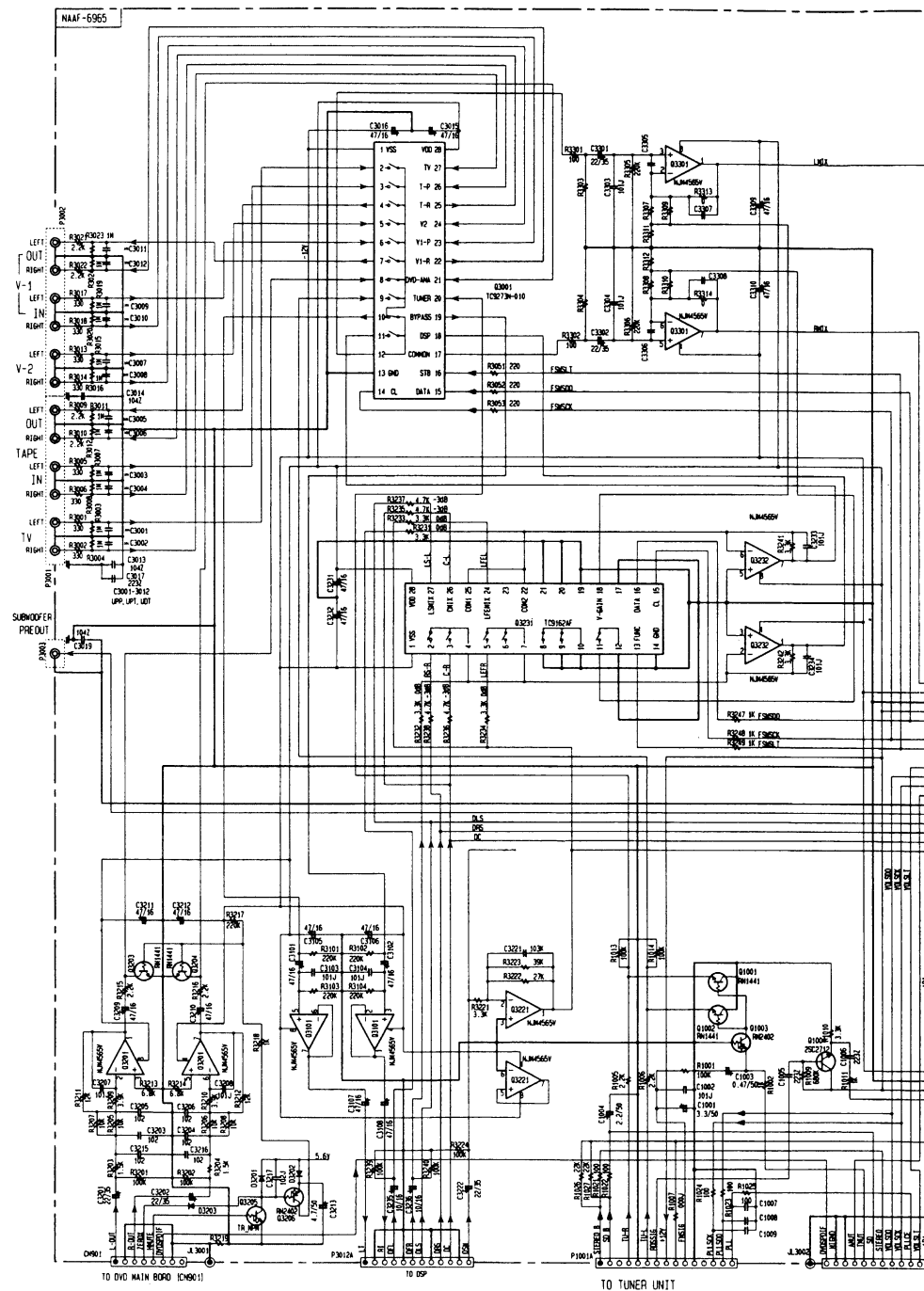


PC BOARD CONNECTION DIAGRAM



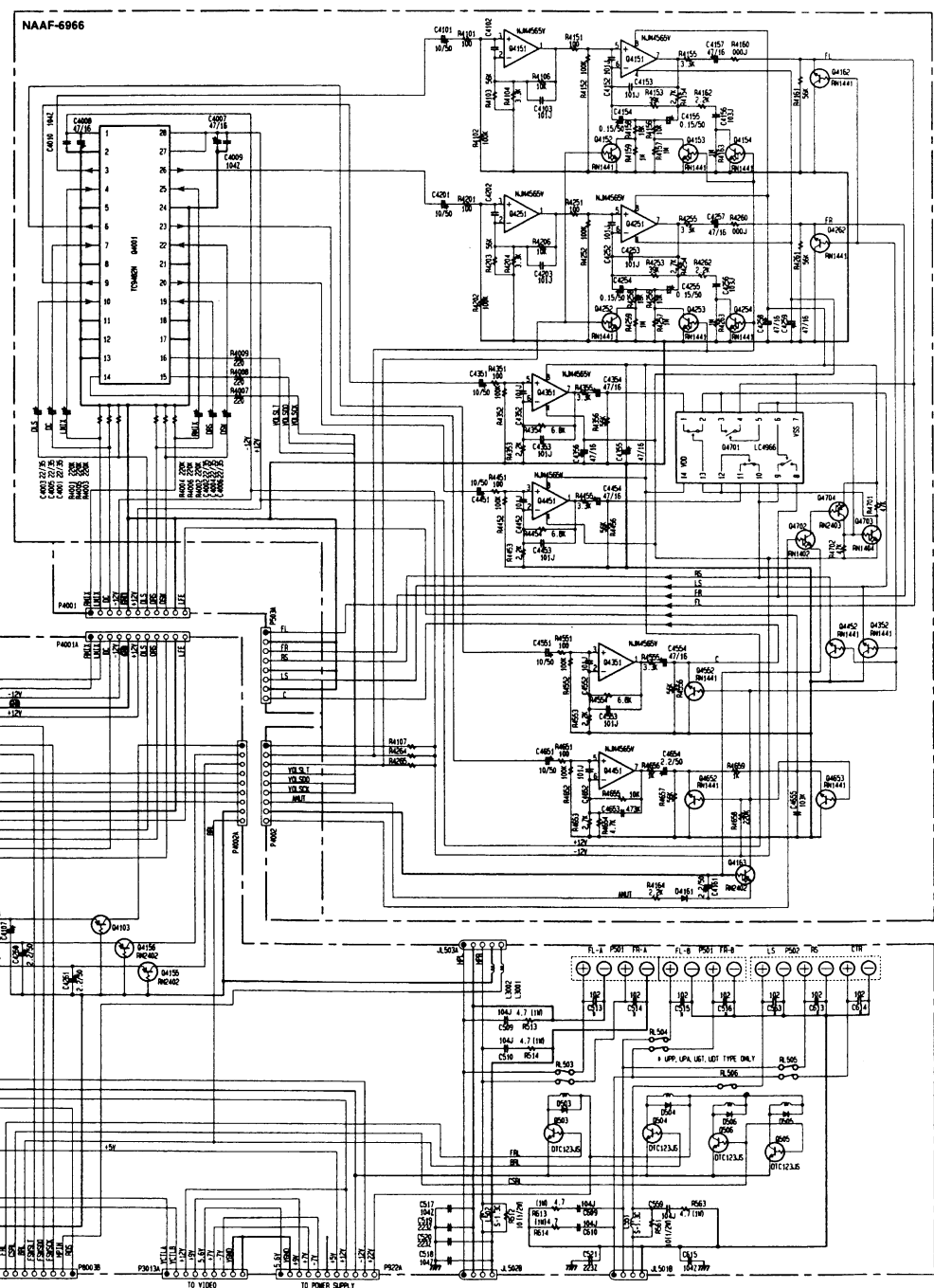
A B C D E F G

CHEMATIC DIAGRAM 6-1



Speaker terminal PC board

Electro volume circuit PC board



2. Confirmation of content of writing (all destinations)

- 2-1. Connect the monitor TV to MONITOR output terminal on the back panel of the unit.
- 2-2. Turn POWER switch to ON to set the standby mode.
- 2-3. Press and hold down SPEAKER A/B and SUBWOOFER MODE buttons, then press STANDBY button.
- 2-4. Confirm that the display on the monitor TV is as follows.

ROM Version V*.*.* -R? *.*.* : Version

Item	UD	UP	UPA
Region	1	2	4
OSD	Eng/Fre/Spa	Eng/Fre/Spa/Ger/Ita	Eng/Fre/Spa
VCD	On	On	On
Buzzer	Off	Off	Off
A. 3D	Off	Off	Off
Random	On	On	On
KARA	Off	Off	Off
DTS	On	On	On
Vocal	Setup	Setup	Setup
Dimmer	1 type	1 type	1 type
V. 3D	Off	Off	Off
V-FMT	NTSC	P/N	P/N
JOG	Off	Off	Off
MPEG-A	On	On	On

3. Initializing the unit.

- 3-1. Set the INPUT selector switch to DVD.
- 3-2. Press SUBWOOFER MODE and Stop (■) buttons at the same time.
- 3-3. Confirm that the setup screen goes out, and the character of " First setup" has displayed.
- 3-4. Turn POWER to OFF, and pull out the power cord.

4. Factory setting confirmation

" setup" as follows each setting of the screen is confirmed.

Item		UD	UP	UPA
Language	On-screen language	Eng	Eng	Eng
	Disc menu language	Eng	Eng	Eng
	Audio language	Eng	Eng	Eng
	Subtitle language	---	---	---
Picture	TV sharp	4 : 3LB	4 : 3LB	4 : 3LB
	Black level	Normal	Normal	ENH
Audio	Audio out select	Bit stream	Bit stream	Bit stream

5. AV connecting confirmation (UP only)

- 5-1. Confirmed the control pins for SCART terminal

Select the "PICTURE" of setup menu.

Voltage of number 16 pin : V/S = 0.4Volt or less .(Load resistor 75 ohm, 16-pin to GND)

- 5-2. Confirm the TV sharp

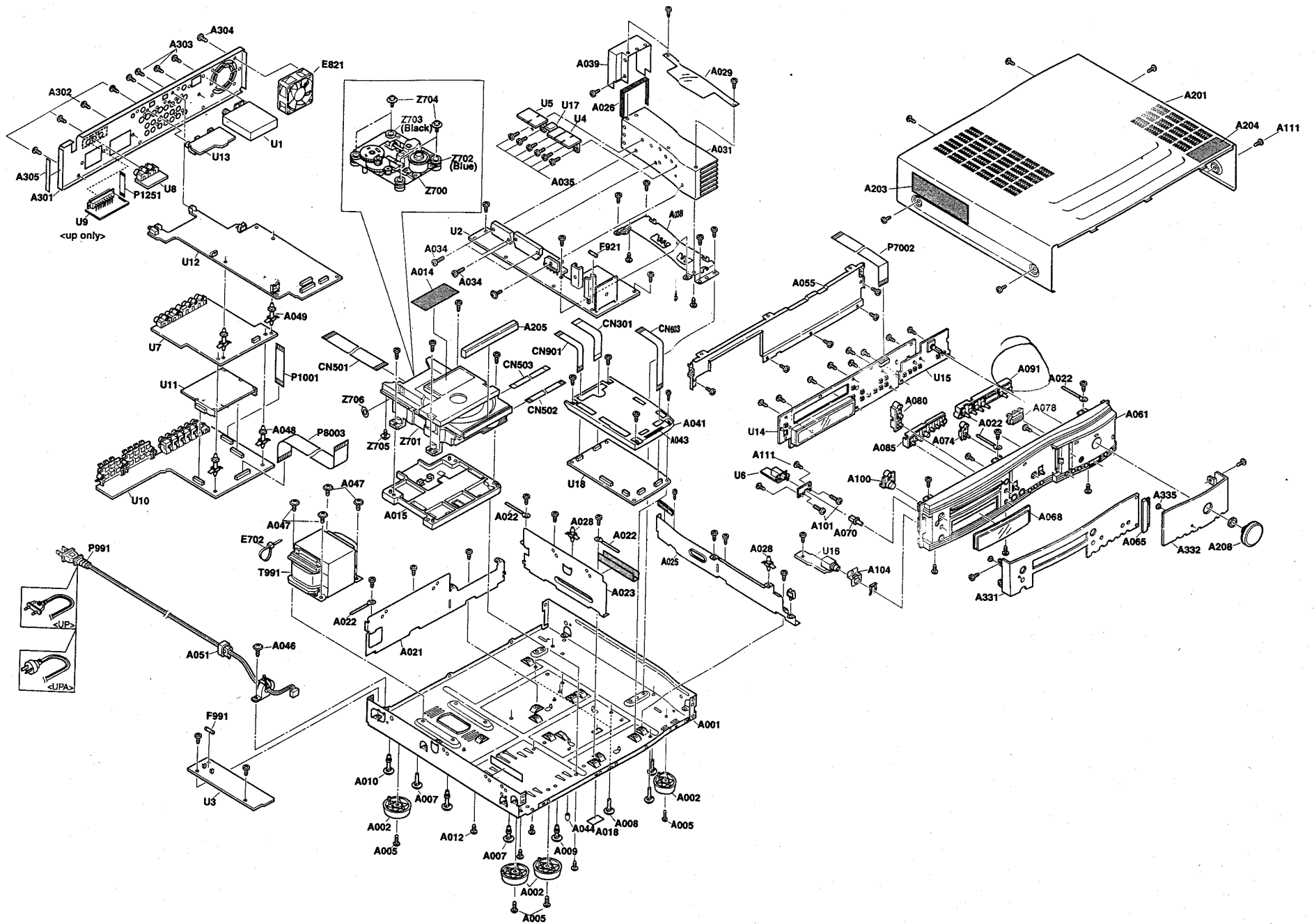
Disc of 6:9 is done in play, and the eighth pin voltages of the Scart terminal are confirmed.

4 : 3 = 9.5 to 12 V 16 : 9 = 5 to 8 V(Load resistor 10k ohm, 8-pin to GND)

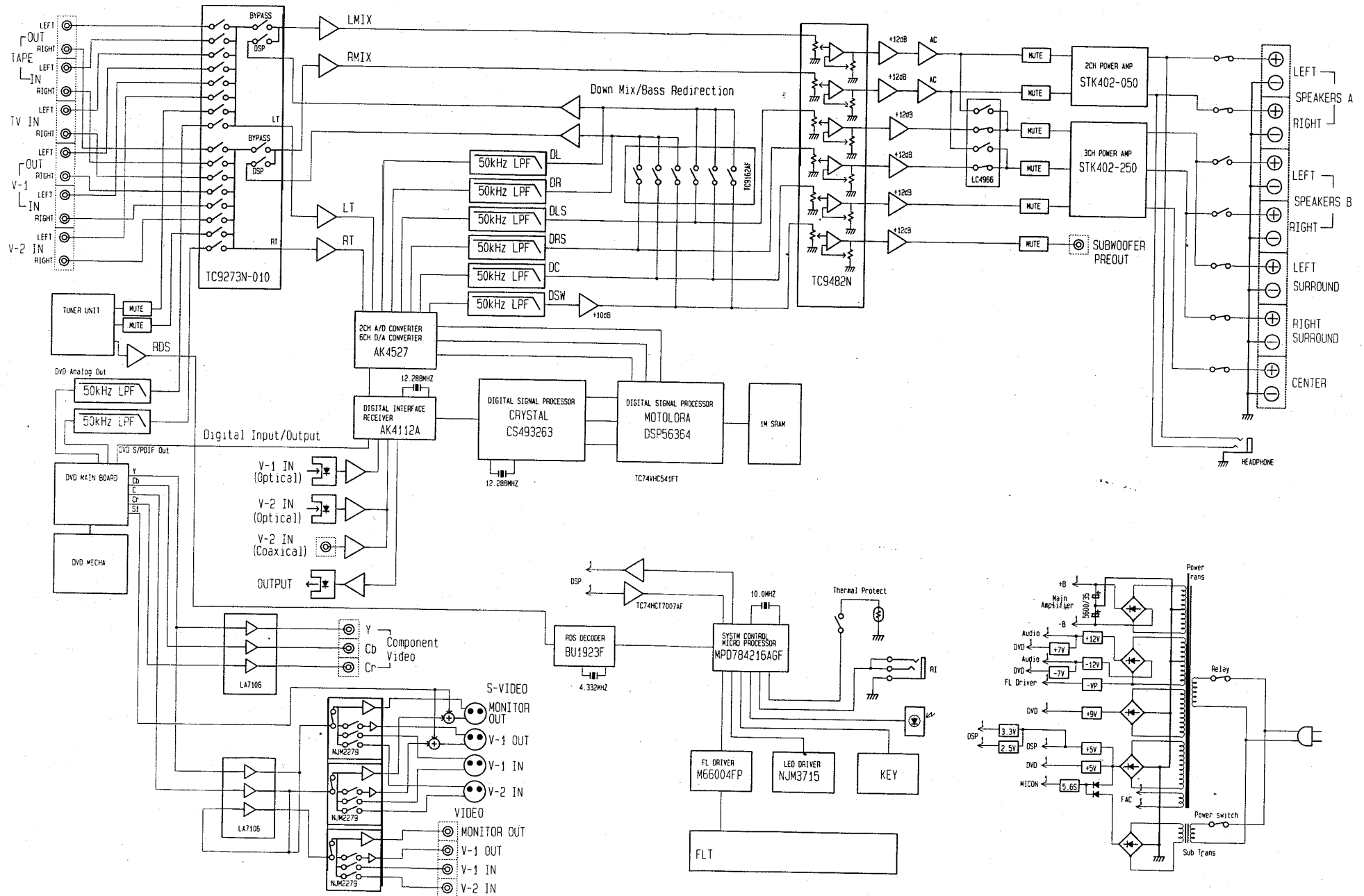
EXPLODED VIEW PARTS LIST

REF.NO.	PART NO.	DESCRIPTION	REF.NO.	PART NO.	DESCRIPTION	REF.NO.	PART NO.	DESCRIPTION
A001	27100391A	Chassis	CN603	2045131022	NCFC5-131022, Flexible flat cable	Z702	24818038A	Insulator (A)
A002	27175388	Leg (AS)	CN901	2045081012	NCFC5-081012, Flexible flat cable	Z703	24818039A	Insulator (B)
A005	831430088	3TTW+8B(BC), Self tapping screw	P1001	2047151012	NCFC7-151012, Flexible flat cable	Z704	801589	PAN head screw (A)
A007	27190991	Holder	P1251	2045131012	NCFC5-131012, Flexible flat cable <UP>	Z755	801590	PAN head screw (B)
A008	27190693A	KGLS-6RF, Holder	P7002	2045221512	NCFC5-221512, Flexible flat cable	Z706	24834041	Washer (C)
A009	27190657	KGLS-18RF, Holder	P8003	2047242512	NCFC7-242512, Flexible flat cable	NOTE		
A010	27190926	KGPS-18RF, Holder	E702	260208	Wire tie			
A012	838130088	3TTB+8B, Self tapping screw	E821	24502313	Fan, D06T-24TH	[<UD> : USA and Canadian model only <UP> : European model only <UPA> : Australian model only]		
A014	29362648	Label (DVD)	F921	Δ 252163	4A-UL/T-237, Fuse <UD>			
A015	27191128	Holder (DVD)		Δ 252077	4A-SE-EAK, Fuse <UP,UPA>	NOTE: THE COMPONENTS IDENTIFIED BY MARK Δ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.		
A018	29362541	Label (Bottom)	F991	Δ 252162	3.15A-UL/T-237, Fuse <UD>			
A021	27130859A	Bracket (C)		Δ 252071	1.25A-SE-EAWK, Fuse <UP,UPA>			
A022	27255004	Clip (CS-1U)	P991	Δ 253294HDK	AS-UC-2#18, Power cord <UD>			
A023	27130860	Bracket (L)		Δ 253237HIT	AS-CBE, Power cord <UP>			
A025	27130861	Bracket (R)		Δ 253268HIT	AS-SAA, Power cord <UPA>			
A026	29110083	Cloth tape (Cloth-16U)	T991	Δ 2301480	NPT-1403D, Power transformer <UD>			
A028	27190897	KGLS-3S, Holder		Δ 2301482	NPT-1403P, Power transformer <UP,UPA>			
A029	28175269	Isolation plate	U1	240134	TFCE1U114A, Tuner unit <UD>			
A031	27160476A	Heat sink, (L)-145		240135	TFCE1E512A Tuner unit <UP/UPA>			
A034	838430167	3TTB+16S(BC), Self tapping screw	U2	1H457554-1A	NAAF-6954-1A, Power amplifier circuit PC board ass'y <UD>			
A035	82143010	3P+10FN(BC), Pan head screw		1H457554-1B	NAAF-6954-1B, Power amplifier circuit PC board ass'y <UP>			
A038	27130858	Bracket (H)		1H457554-1C	NAAF-6954-1C, Power amplifier circuit PC board ass'y <UPA>			
A039	27141780	Retainer (HD)	U3	1H457555-1A	NAAF-6955-1A, Primary circuit PC board ass'y <UD>			
A041	27225143E	Shield case		1H457555-1B	NAAF-6955-1B, Primary circuit PC board ass'y <UP>			
A043	28141443	Cushion (DAC)		1H457555-1C	NAAF-6955-1C, Primary circuit PC board ass'y <UPA>			
A044	28330135A	Cap	U4	1H457556-1A	NAPS-6956-1A, 1 St regulator IC PC board ass'y <UD>			
A046	831430088	3TTW+8B(BC), Self tapping screw		1H457556-1B	NAPS-6956-1B, 1 St regulator IC PC board ass'y <UP>			
A047	830440069	4TTC+6C(BC), Self tapping screw		1H457556-1C	NAPS-6956-1C, 1 St regulator IC PC board ass'y <UPA>			
A048	27190470	KGLS-18S, Holder	U5	1H457557-1A	NAPS-6957-1A, 2 ND regulator IC PC board ass'y <UD>			
A049	27190164	KGLS-14S, Holder		1H457557-1B	NAPS-6957-1B, 2 ND regulator IC PC board ass'y <UP>			
A051	Δ 27300750	Bushing (#2271)		1H457557-1C	NAPS-6957-1C, 2 ND regulator IC PC board ass'y <UPA>			
A055	27130862A	Bracket (F)	U6	1H457558-1A	NAETC-6958-1A, Power switch PC board ass'y <UD>			
A061	27111187C	Front bracket AS		1H457558-1B	NAETC-6958-1B, Power switch PC board ass'y <UP>			
A065	28198919	Facet (Light)		1H457558-1C	NAETC-6958-1C, Power switch PC board ass'y <UPA>			
A068	28191906A	Clear plate (Display)	U7	1H457559-1A	NAVD-6959-1A, Video amplifier circuit PC board ass'y <UD>			
A070	28325874A	Knob (POW AS)		1H457559-1B	NAVD-6959-1B, Video amplifier circuit PC board ass'y <UP>			
A074	28325876	Knob (Acoustic Presence-AS)		1H457559-1C	NAVD-6959-1C, Video amplifier circuit PC board ass'y <UPA>			
A078	28191907	Clear plate (RE)	U8	1H457560-1A	NADG-6960-1A, Video component output PC board ass'y <UD>			
A080	28325878	Knob (Input-1 AS)		1H457560-1C	NADG-6960-1C, Video component output PC board ass'y <UPA>			
A085	28325880A	Knob (Input-2 AS)	U9	1H457561-1B	NAVD-6961-1B, AV connector PC board <UP>			
A091	28325882	Knob (Input-3 AS)	U10	1H457565-1A	NAAF-6965-1A, Speaker terminal PC board ass'y <UD>			
A100	28325868	Knob (Power)		1H457565-1B	NAAF-6965-1B, Speaker terminal PC board ass'y <UP>			
A101	82143010	3P+10FN(BC), Pan head screw		1H457565-1C	NAAF-6965-1C, Speaker terminal PC board ass'y <UPA>			
A104	27141781	Retainer (HP)	U11	1H457566-1A	NAAF-6966-1A, Electro volume circuit PC board <UD>			
A111	838430088	3TTB+8B(BC), Self tapping screw		1H457566-1B	NAAF-6966-1B, Electro volume circuit PC board <UP>			
A201	28184800	Top cover		1H457566-1C	NAAF-6966-1C, Electro volume circuit PC board <UPA>			
A203	29362760	Label	U12	1H457569-1A	NADG-6969-1A, Microprocessor/ DSP circuit PC board ass'y			
A204	29362772	Label (COVER)		1H457569-1B	NADG-6969-1B, Microprocessor/ DSP circuit PC board ass'y			
A205	28148464	Door (TRAY)		1H457569-1C	NADG-6969-1C, Microprocessor/ DSP circuit PC board ass'y			
A208	28325872	Knob (VOL AS)	U13	1H457570-1A	NADG-6970-1A, Digital in-out terminal PC board ass'y <UD>			
A301	27122779A	Rear panel <UD>		1H457570-1B	NADG-6970-1B, Digital in-out terminal PC board ass'y <UP>			
	27122780A	Rear panel <UP>		1H457570-1C	NADG-6970-1C, Digital in-out terminal PC board ass'y <UPA>			
	27122781A	Rear panel <UPA>	U14	1H457576-1A	NADIS-6976-1A, Display circuit PC board ass'y <UD>			
A302	838430088	3TTB+8B(BC), Self tapping screw		1H457576-1B	NADIS-6976-1B, Display circuit PC board ass'y <UP>			
A303	838430068	3TTB+6B(BC), Self tapping screw		1H457576-1C	NADIS-6976-1A, Display circuit PC board ass'y <UPA>			
A304	833450102	5STP+10BQ(BC), Self tapping screw	U15	1H457577-1A	NASW-6977-1A, Key switch PC board ass'y <UD>			
A305	28141447	Cushion		1H457577-1B	NASW-6977-1B, Key switch PC board ass'y <UP>			
A331	27212254	Front panel A <UD>		1H457577-1C	NASW-6977-1C, Key switch PC board ass'y <UPA>			
	27212254	Front panel A <UP,UPA>	U16	1H457578-1A	NAETC-6978-1A, Head phone terminal PC board ass'y <UD>			
A332	27212255	Front panel B <UD>		1H457578-1B	NAETC-6978-1B Head phone terminal PC board ass'y <UP>			
	27212260	Front panel B <UP>		1H457578-1C	NAETC-6978-1C, Head phone terminal PC board ass'y <UPA>			
	27212255	Front panel B <UPA>	U17	1H457521-1A	NAETC-7021-1A, Thermister PC board ass'y <UD>			
A335	28198918	Facet (IP)		1H457521-1B	NAETC-7021-1B, Thermister PC board ass'y <UP>			
A803	27190608-1	Holder UA-0 V0		1H457521-1C	NAETC-7021-1C, Thermister PC board ass'y <UPA>			
CN301	2045141012	NCFC5-141012, Flexible flat cable	U18	24150016	SD-30F1, Main circuit PC board ass'y			
CN501	2042233012	NCFC2-233012, Flexible flat cable	Z700	24801006	SD-9200K2-ZSS_DVD Traverse mechanism ass'y			
CN502	2047061513	NCFC7-061513, Flexible flat cable	Z701	24801007	DVD tray/ loading mechanism ass'y			
CN503	2045081212	NCFC5-081212, Flexible flat cable						

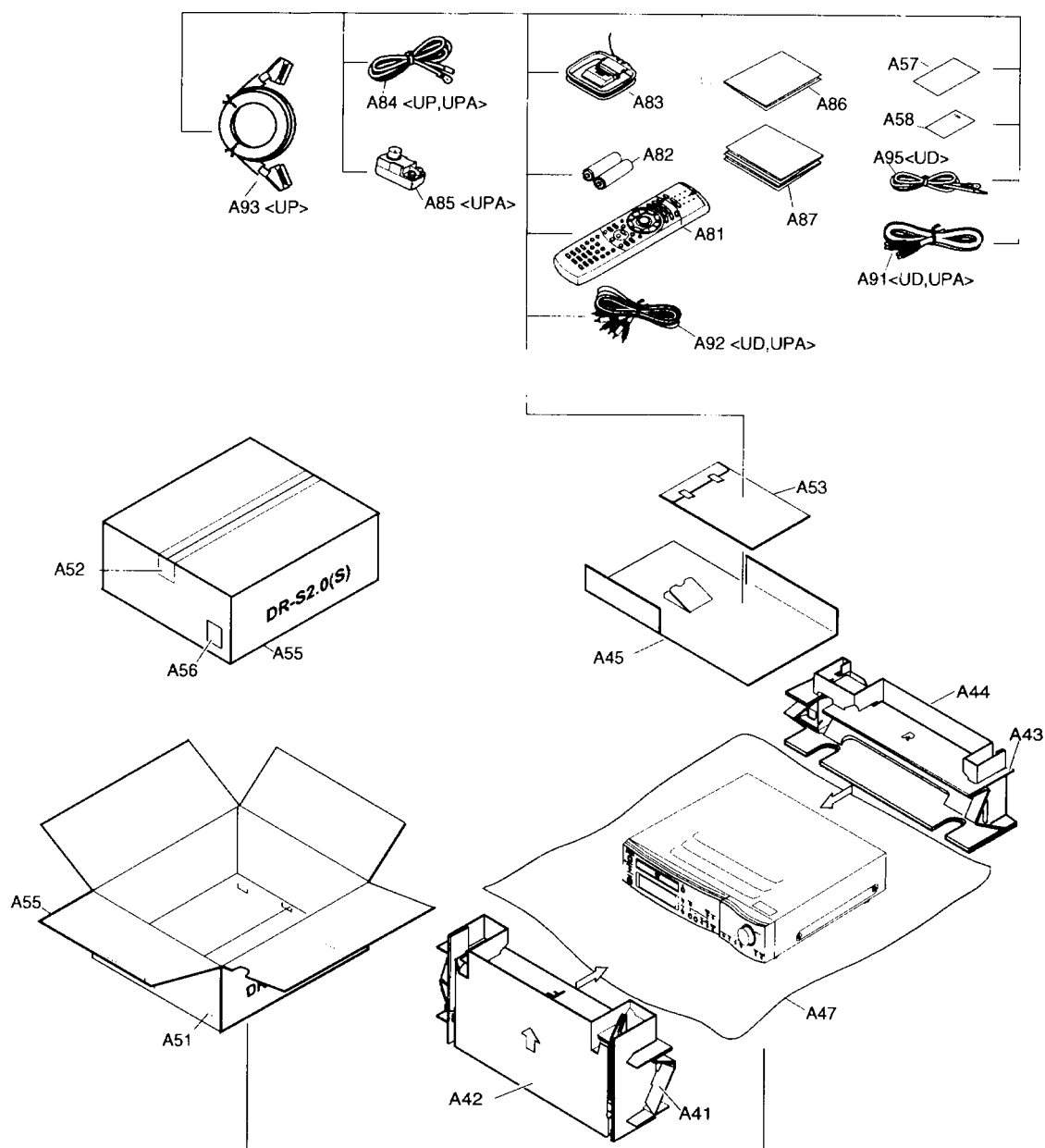
EXPLODED VIEW



BLOCK DIAGRAM



PACKING VIEW



PARTS LIST

REF.NO.	PART NO.	DESCRIPTION	REF.NO.	PART NO.	DESCRIPTION
A41	29091951	Pad(FB)	A86	29342957	Instruction manual (E) <UD,UPA>
A42	29091952A	Pad(FS)		29342975A	Instruction manual (E) <UP>
A43	29091960	Pad(RB)	A87	29342958	Instruction manual (U2FS) <UPA>
A44	29091962A	Pad(RS)		29342959A	Instruction manual (U2GD) <UP>
A45	29095889	Sheet (Accessory)		29342972A	Instruction manual (U2SWI) <UP>
A47	29095847	Sheet		29342976A	Instruction manual (U2FS) <UP>
A51	282301	Staple (6pcs)	A91	2010360	S Video cable, TPX3000 <UD,UPA>
A52	29110141	Tape (3301 W50L100)	A92	2010359 or	Audio cable (RCA-3P) <UD,UPA>
A53	29100097-1A	Polybag, 350*250		2010359TAIDA or	Audio cable (RCA-3P) <UD,UPA>
A55	29053653A	Carton box <UD>		2010359TES	Audio cable (RCA-3P) <UD,UPA>
	29053654A	Carton box <UP>	A93	2010368	AV cable, YAF11-0697 <UP>
	29053655A	Carton box <UPA>	A95	292160	FM antenna (D-type) <UD>
A56	29362752	Label (UPC) <UD>			
	29362754	Label (EAN) <UP,UPA>			
A57	29365083	Warranty card <UD>			
A58	29095866	Sheet (Onkyo) <UD>			
A81	24140437	Remote controller (RC-437M)			
A82	3010054	Battery (UM-3)			
A83	232140	AM antenna (NMA-3057)			
A84	292116	FM antenna (P-type) <UP, UPA>			
A85	25065462	FM adapter (YAE21-0237) <UPA>			

UD : USA and Canadian models only

UP : European model only

UPA : Australian model only